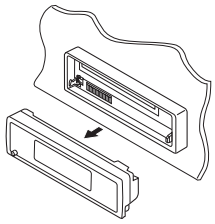
JVC

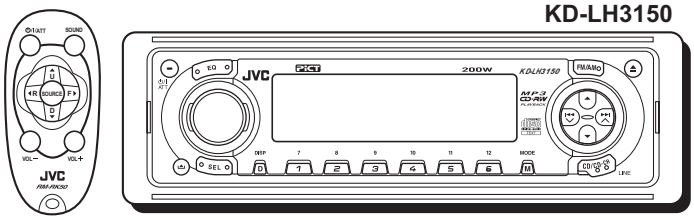
SERVICE MANUAL

CD RECEIVER

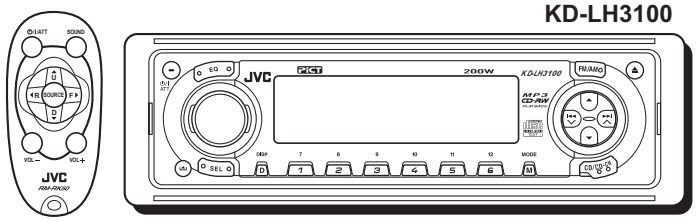
KD-LH3150, KD-LH3100



KD-LH3150



KD-LH3100



PICT

COMPACT disc DIGITAL AUDIO TEXT

MP3 CD-RW PLAYBACK

KD-LH3150
Area Suffix
J ---------- U.S.A.
C ---------- CANADA

	KD-LH3150J	KD-LH3150C	KD-LH3100J
ARSENAL rogo	○	×	×
LINE in	○	○	×
Line output level	4 V	4 V	2 V
WARRANTY	2 YEAR	1 YEAR	1 YEAR

KD-LH3100
Area Suffix
J ---------- U.S.A.

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No.49838
2003/5

SECTION 1
Important Safety Precautions

1.1 Safety Precautions

⚠ ***CAUTION*** **Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

⚠ ***CAUTION*** **Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

1.2 Preventing static electricity

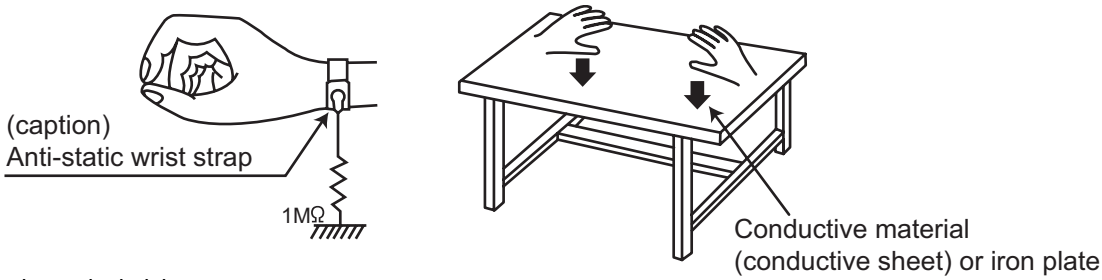
Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

1.2.1 Grounding to prevent damage by static electricity

Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as DVD players. Be careful to use proper grounding in the area where repairs are being performed.

(1) Ground the workbench
Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

(2) Ground yourself
Use an anti-static wrist strap to release any static electricity built up in your body.



(3) Handling the optical pickup
- In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)
- Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

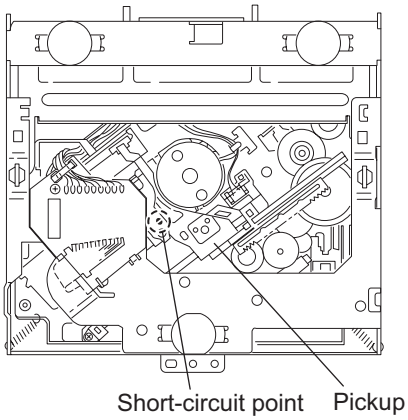
1.3 Handling the traverse unit (optical pickup)

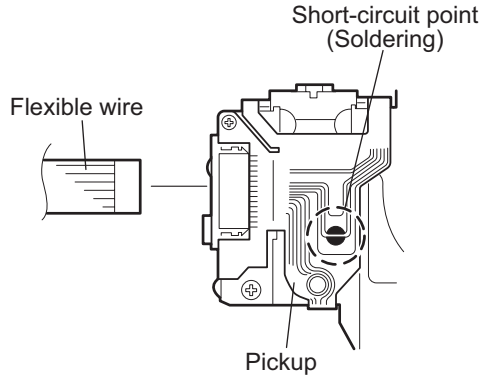
(1) Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.
(2) Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.
(3) Handle the flexible cable carefully as it may break when subjected to strong force.
(4) It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it.

1.4 Attention when traverse unit is decomposed

***Please refer to "Disassembly method" in the text for the CD pickup unit.**

- Apply solder to the short land before the flexible wire is disconnected from the connector on the CD pickup unit. (If the flexible wire is disconnected without applying solder, the CDpickup may be destroyed by static electricity.)
- In the assembly, be sure to remove solder from the short land after connecting the flexible wire.





SECTION 2
Disassembly method

2.1 Main body

2.1.1 Removing the front panel assembly (See Fig.1)

(1) Push the detach button in the lower left part of the front panel assembly and remove the front panel assembly.

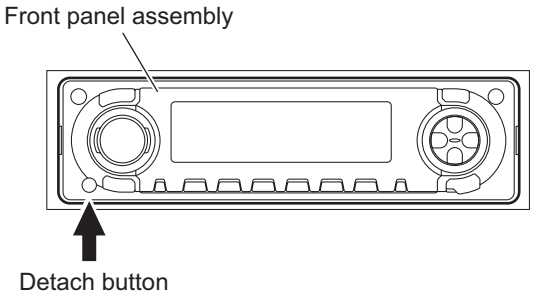


Fig.1

2.1.2 Removing the bottom cover (See Fig.2)

• Prior to performing the following procedure, remove the front panel assembly as required.

(1) Turn over the main body and release the two joints **a**, two joints **b** and joint **c**.

NOTE:

Do not damage the main board when releasing the joints using a screwdriver.

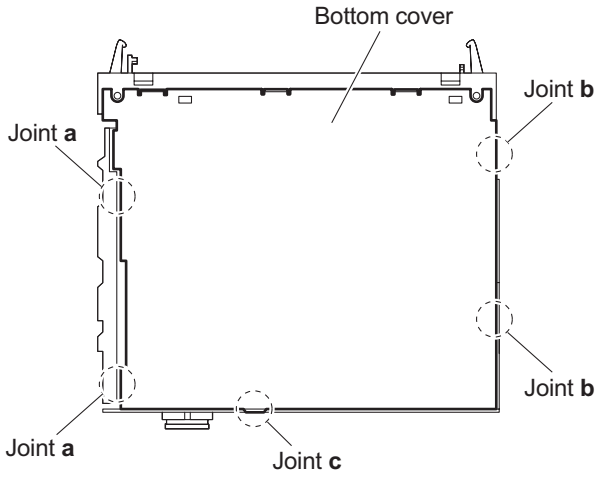


Fig.2

2.1.3 Removing the front chassis assembly (See Figs.3 and 4)

- Prior to performing the following procedures, remove the front panel assembly and bottom cover.
  (1) Remove the two screws **A** on the both sides of the main body. (See Fig.3.)
  (2) Remove the two screws **B** on the front side of the main body. (See Fig.4.)
  (3) Release the two joints **d** and two joints **e** on the both sides of the main body. (See Fig.3.)

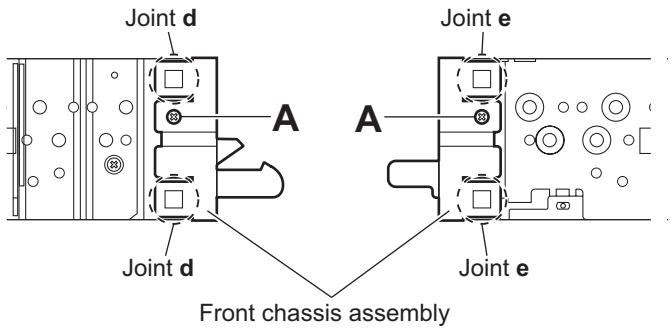


Fig.3

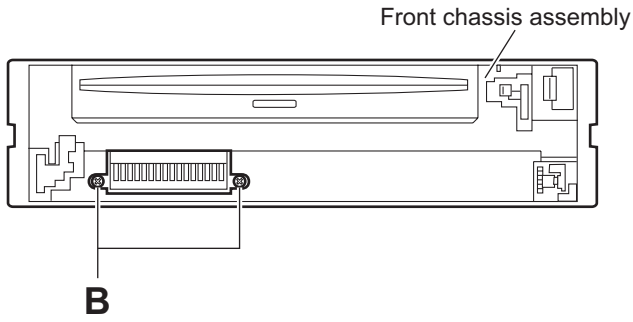


Fig.4

2.1.4 Removing the heat sink (See Fig.5)

- Prior to performing the following procedure, remove the front panel assembly as required.
  (1) Remove the two screws **C** and two screws **D** on the left side of the main body.

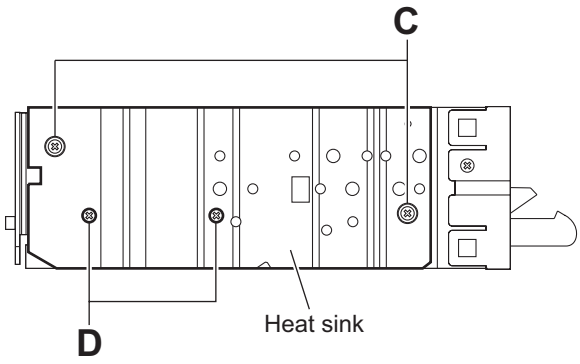


Fig.5

2.1.5 Removing the rear bracket (See Fig.6)

- Prior to performing the following procedures, remove the bottom cover.
  (1) Remove the three screws **E**, three screws **F** and three screws **G** on the back side of the main body.
  (2) Remove the rear bracket.

REFERENCE:

During reassembly, before fixing the rear bracket onto the main body, insert the SUB WOOFER cable and LINE IN cable (KD-LH3150 only) into the slots.

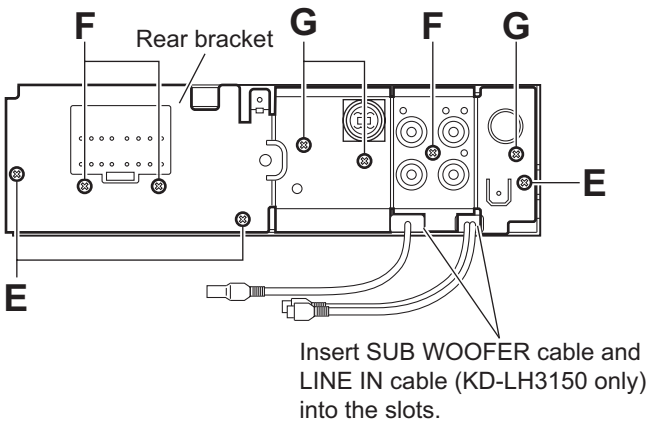


Fig.6

2.1.6 Removing the main board (See Fig.7)

- Prior to performing the following procedures, remove the front panel assembly, bottom cover, front chassis assembly, heat sink and rear bracket
  (1) Remove the two screws **H** attaching the main board.
  (2) Disconnect the connector CN601 and remove the main board in an upward direction.

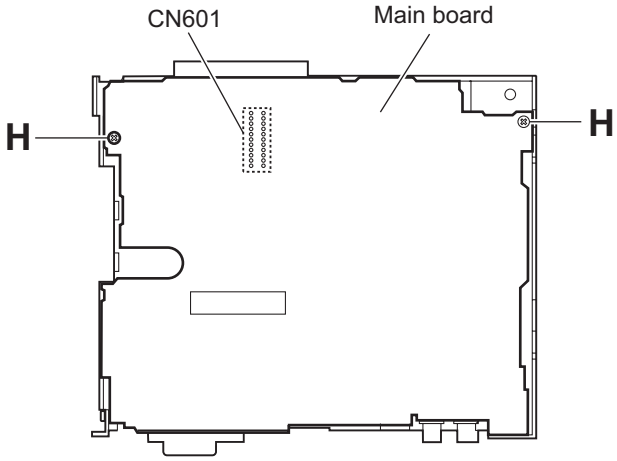


Fig.7

2.1.7 Removing the mecha control board (See Fig.8)

- Prior to performing the following procedures, remove the front panel assembly, bottom cover, front chassis assembly, heat sink, rear bracket and main board.
  (1) Remove the five screws **J** attaching the mecha control board.
  (2) Disconnect the card wire from the mecha connector.
  (3) Move the mecha control board in the direction of the arrow to release it from the joint **f**.

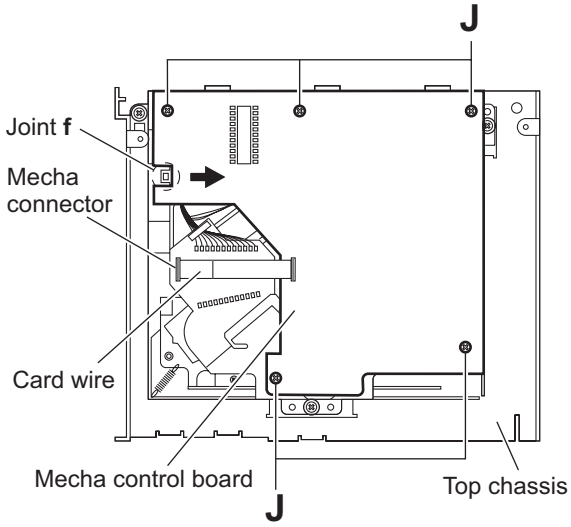


Fig.8

2.1.8 Removing the CD mechanism assembly (See Fig.9)

- Prior to performing the following procedure, remove the front panel assembly, bottom cover, front chassis assembly, heat sink, rear bracket, main board and mecha control board.
  (1) Remove the three screws **K** attaching the CD mechanism assembly to the top chassis.

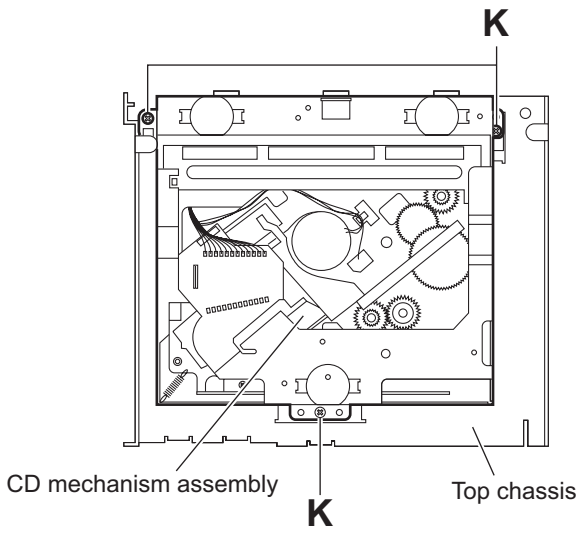


Fig.9

2.1.9 Removing the front board (See Figs.10 to 12)

- Prior to performing the following procedures, remove the front panel assembly.
  (1) Remove the five screws **L** attaching the rear cover on the back side of the front panel assembly. (See Fig.10.)
  (2) Release the eight joints **g**, remove the rear cover from the front panel assembly. (See Fig.11.)
  (3) Take out the front board. (See Fig.12.)

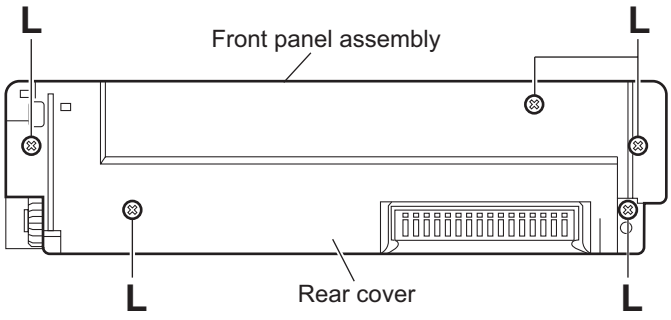


Fig.10

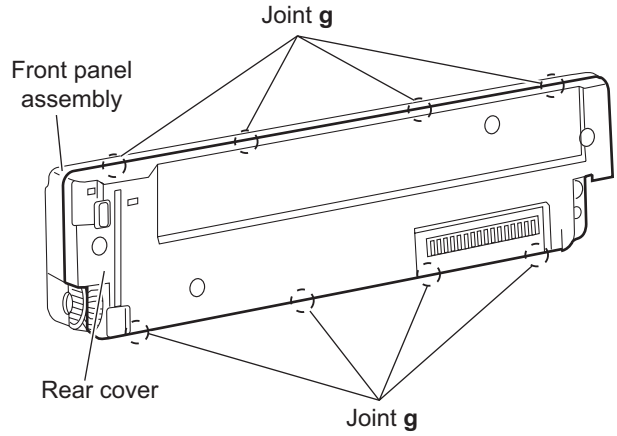


Fig.11

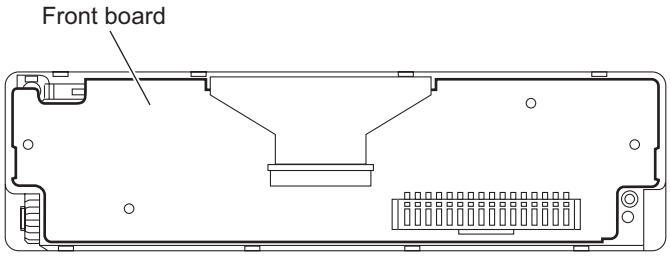


Fig.12

2.2 CD Mechanism section

2.2.1 Removing the top cover (See Figs.1 and 2)

(1) Remove the four screws **A** on the both side of the body.
(2) Lift the front side of the top cover and move the top cover backward to release the two joints **a**.

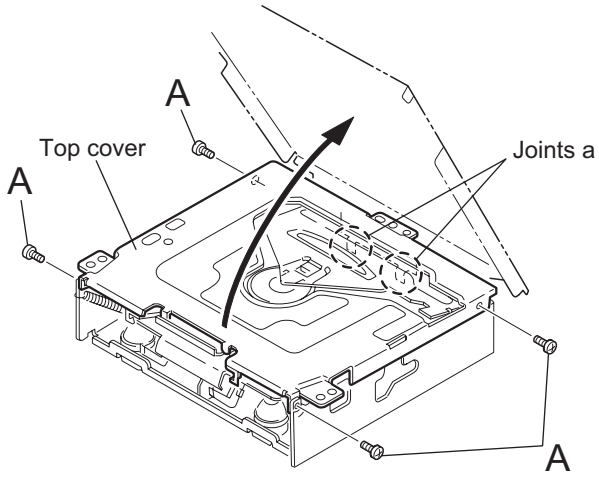


Fig.1

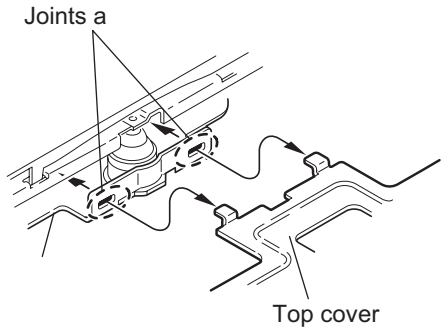


Fig.2

2.2.2 Removing the connector board (See Figs.3 to 5)

CAUTION:

Before disconnecting the flexible wire from the pickup, solder the short-circuit point on the pickup. No observance of this instruction may cause damage of the pickup.

(1) Remove the screw **B** fixing the connector board.
(2) Solder the short-circuit point on the pickup.
(3) Disconnect the flexible wire from the pickup.
(4) Move the connector board in the direction of the arrow to release the two joints **b**.
(5) Unsolder the wires on the connector board if necessary.

CAUTION:

Unsolder the short-circuit point after reassembling.

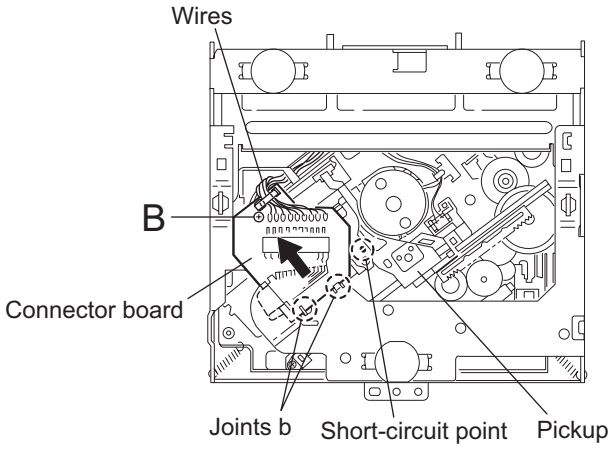


Fig.3

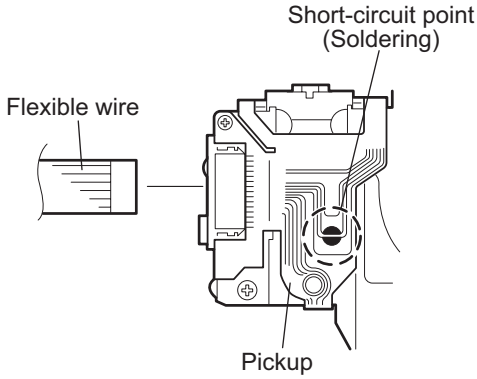


Fig.4

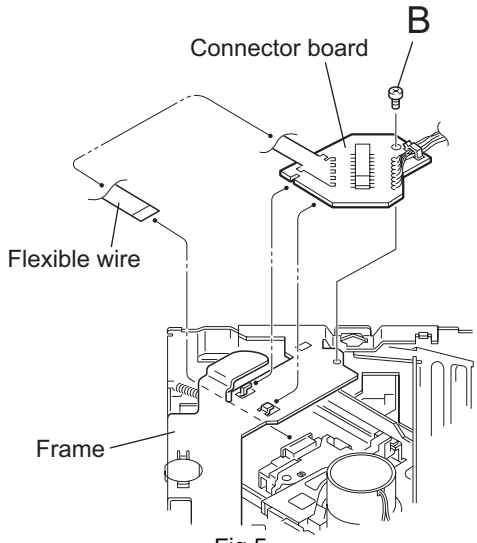


Fig.5

2.2.3 Removing the DET switch (See Figs.6 and 7)

(1) Extend the two tabs **c** of the feed sw. holder and pull out the switch.
(2) Unsolder the DET switch wire if necessary.

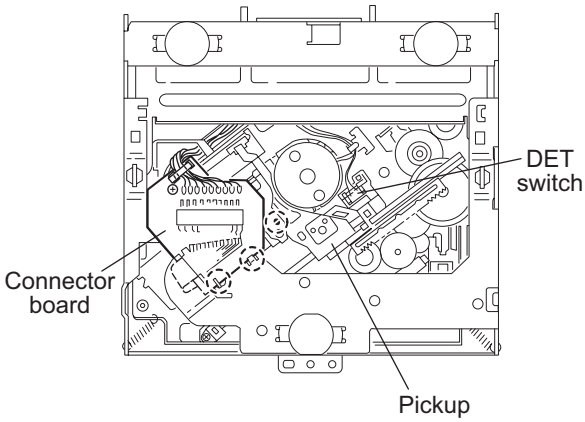


Fig.6

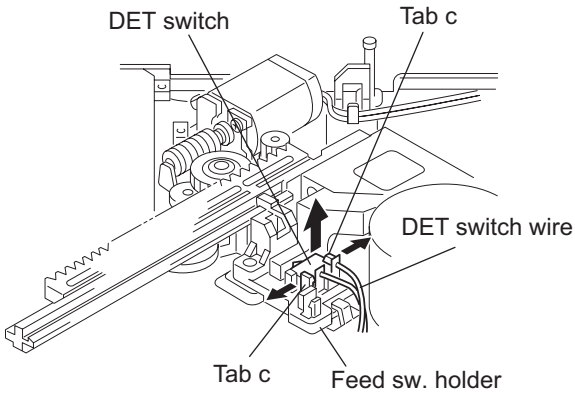


Fig.7

2.2.4 Removing the chassis unit (See Figs.8 and 9)

- Prior to performing the following procedure, remove the top cover and connector board.
  (1) Remove the two suspension springs (L) and (R) attaching the chassis unit to the frame.

CAUTION:

- The shape of the suspension spring (L) and (R) are different. Handle them with care.
- When reassembling, make sure that the three shafts on the underside of the chassis unit are inserted to the dampers certainly.

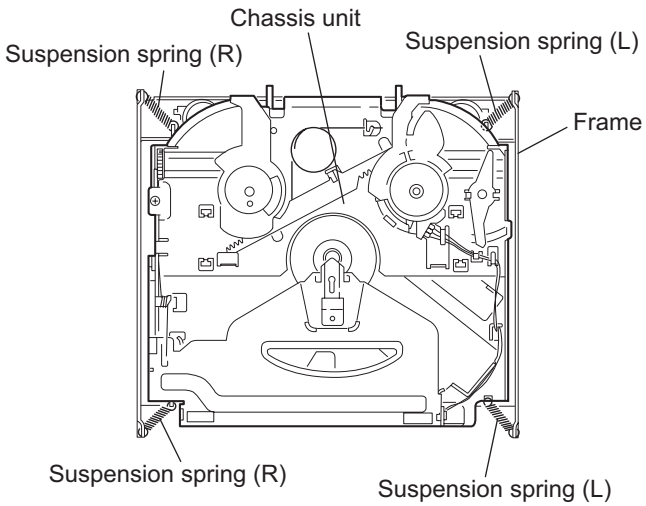


Fig.8

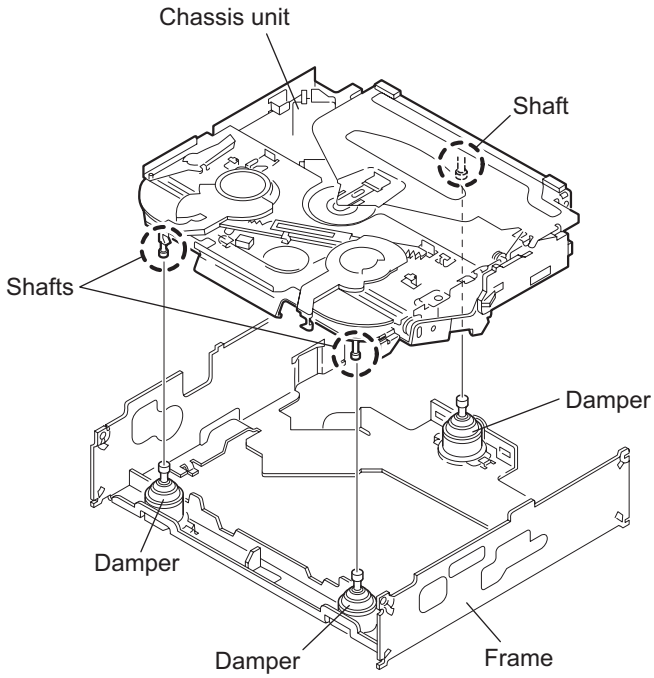


Fig.9

2.2.5 Removing the clamper assembly (See Figs.10 and 11)

- Prior to performing the following procedure, remove the top cover.
  (1) Remove the clamper arm spring.
  (2) Move the clamper assembly in the direction of the arrow to release the two joints **d**.

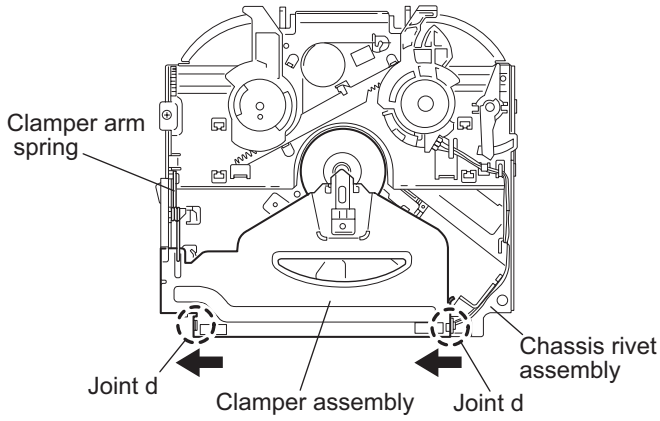


Fig.10

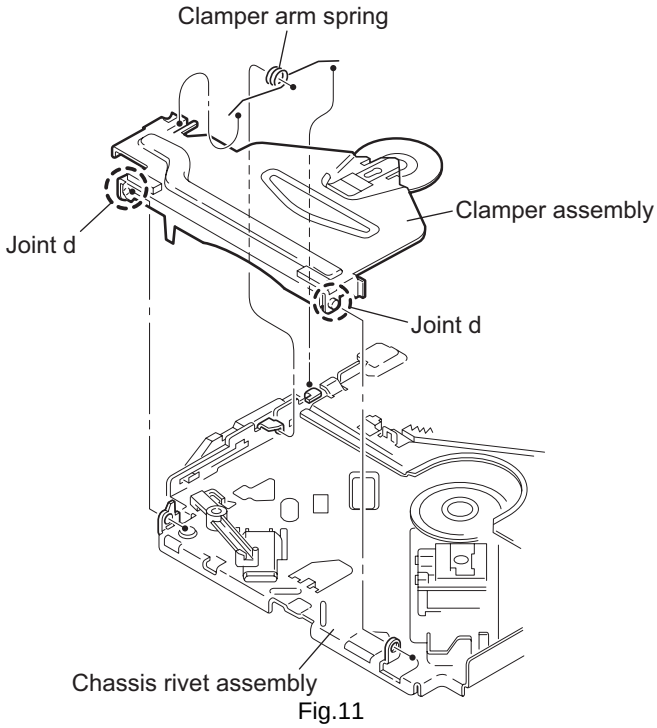


Fig.11

2.2.6 Removing the loading / feed motor assembly (See Figs.12 and 13)

- Prior to performing the following procedure, remove the top cover, connector board and chassis unit.
  (1) Remove the screw **C** and move the loading / feed motor assembly in the direction of the arrow to remove it from the chassis rivet assembly.
  (2) Disconnect the wire from the loading / feed motor assembly if necessary.

  CAUTION:
  When reassembling, connect the wire from the loading / feed motor assembly to the flame as shown in Fig.12.

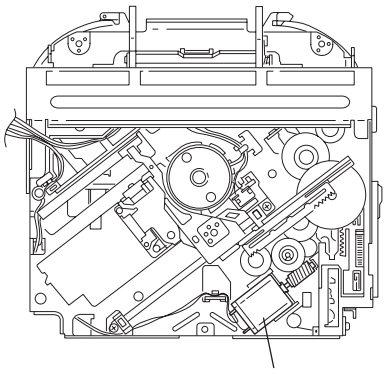


Fig.12

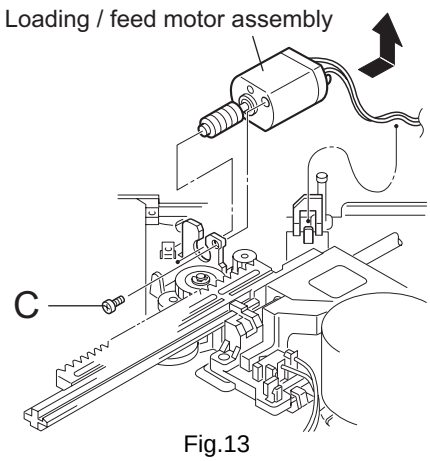


Fig.13

2.2.7 Removing the pickup unit (See Figs.14 to 18)

- Prior to performing the following procedure, remove the top cover, connector board and chassis unit.
  (1) Remove the screw **D** and pull out the pu. shaft holder from the pu. shaft.
  (2) Remove the screw **E** attaching the feed sw. holder.
  (3) Move the part **e** of the pickup unit upward with the pu. shaft and the feed sw. holder, then release the joint **f** of the feed sw. holder in the direction of the arrow. The joint **g** of the pickup unit and the feed rack is released, and the feed sw. holder comes off.
  (4) Remove the pu. shaft from the pickup unit.
  (5) Remove the screw **F** attaching the feed rack to the pickup unit.

2.2.8 Reattaching the pickup unit (See Figs.14 to 17)

(1) Reattach the feed rack to the pickup unit using the screw **F**.
(2) Reattach the feed sw. holder to the feed rack while setting the joint **g** to the slot of the feed rack and setting the joint **f** of the feed rack to the switch of the feed sw. holder correctly.
(3) As the feed sw. holder is temporarily attached to the pickup unit, set to the gear of the joint **g** and to the bending part of the chassis (joint **h**) at a time.

CAUTION:

Make sure that the part **i** on the underside of the feed rack is certainly inserted to the slot **j** of the change lock lever.

(4) Reattach the feed sw. holder using the screw **E**.
(5) Reattach the pu. shaft to the pickup unit. Reattach the pu. shaft holder to the pu. shaft using the screw **D**.

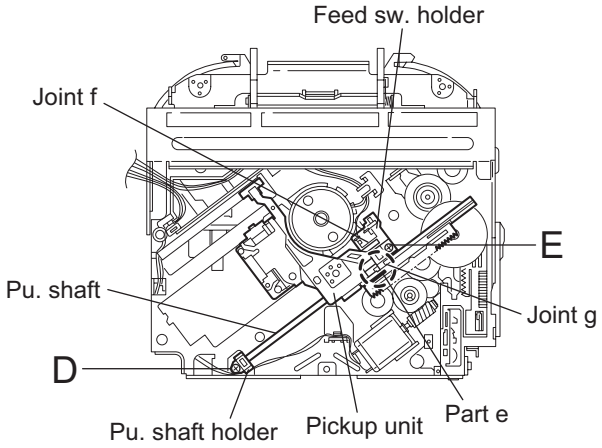


Fig.14

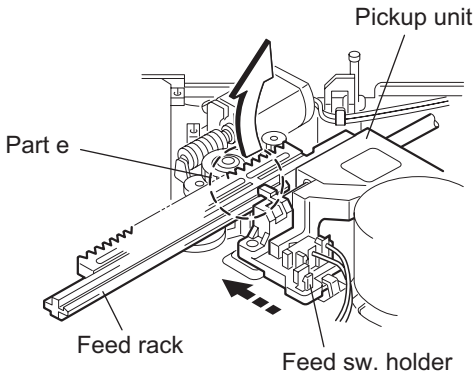


Fig.15

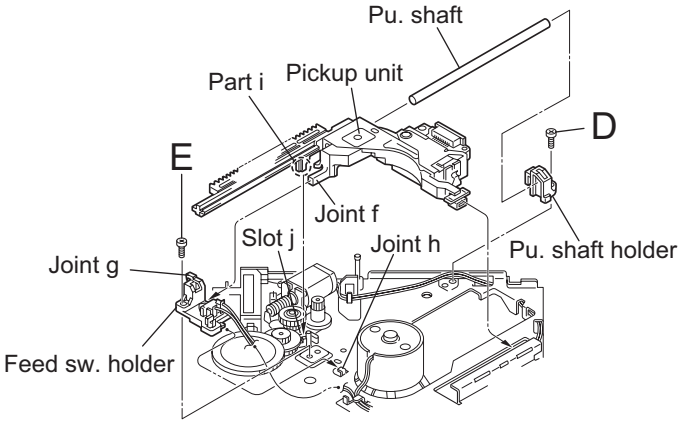


Fig.16

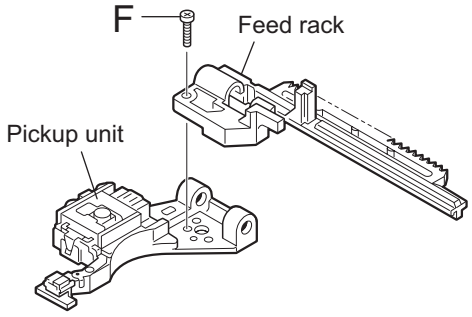


Fig.17

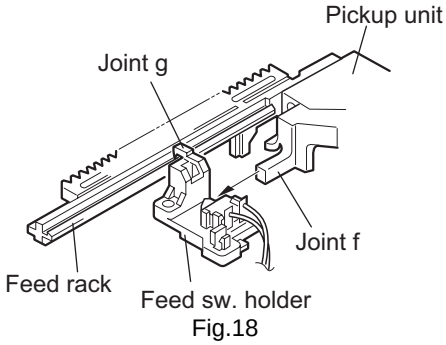


Fig.18

2.2.9 Removing the trigger arm (See Figs.19 and 20)

- Prior to performing the following procedure, remove the top cover, connector board and clamper unit.
  (1) Turn the trigger arm in the direction of the arrow to release the joint **k** and pull out upward.

  CAUTION:

  When reassembling, insert the part **m** and **n** of the trigger arm into the part **p** and **q** at the slot of the chassis rivet assembly respectively and join the joint **k** at a time.

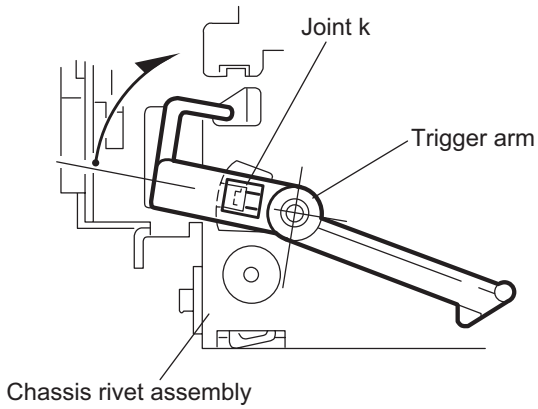


Fig.19

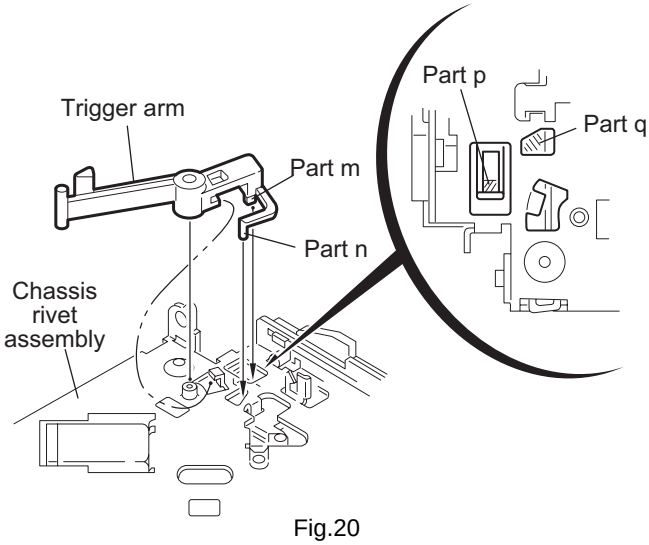


Fig.20

2.2.10 Removing the top plate assembly (See Fig.21)

- Prior to performing the following procedure, remove the top cover, connector board, chassis unit, and clamper assembly.
  (1) Remove the screw **H**.
  (2) Move the top plate assembly in the direction of the arrow to release the two joints **r**.
  (3) Unsolder the wire marked **s** if necessary.

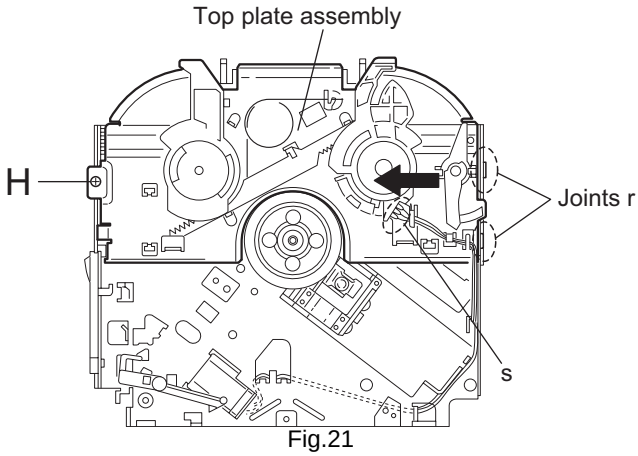


Fig.21

2.2.11 Removing the mode sw. / select lock arm (See Figs.22 and 23)

- Prior to performing the following procedure, remove the top plate assembly.
  (1) Bring up the mode sw. to release from the link plate (joint **t**) and turn in the direction of the arrow to release the joint **u**.
  (2) Unsolder the wire of the mode sw. marked **s** if necessary.
  (3) Turn the select lock arm in the direction of the arrow to release the two joints **v**.
  (4) The select lock arm spring comes off the select lock arm at the same time.

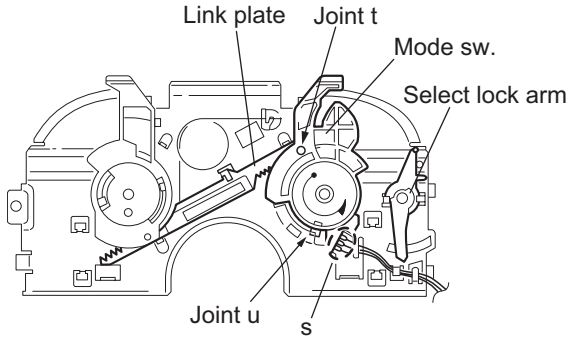


Fig.22

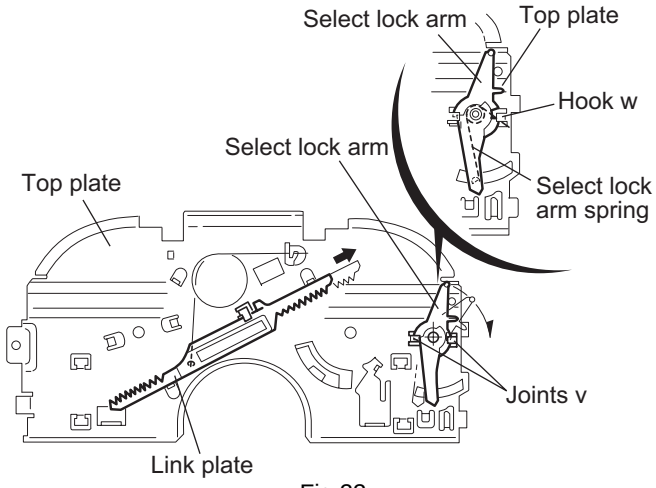


Fig.23

2.2.12 Reassembling the mode sw. / select lock arm (See Figs.24 to 26)

REFERENCE:

Reverse the above removing procedure.

(1) Reattach the select lock arm spring to the top plate and set the shorter end of the select lock arm spring to the hook **w** on the top plate.

(2) Set the other longer end of the select lock arm spring to the boss **x** on the underside of the select lock arm, and join the select lock arm to the slots (joint **v**). Turn the select lock arm as shown in the figure.

(3) Reattach the mode sw. while setting the part **t** to the first peak of the link plate gear, and join the joint **u**.

CAUTION:

When reattaching the mode sw., check if the points **y** and **z** are correctly fitted and if each part operates properly.

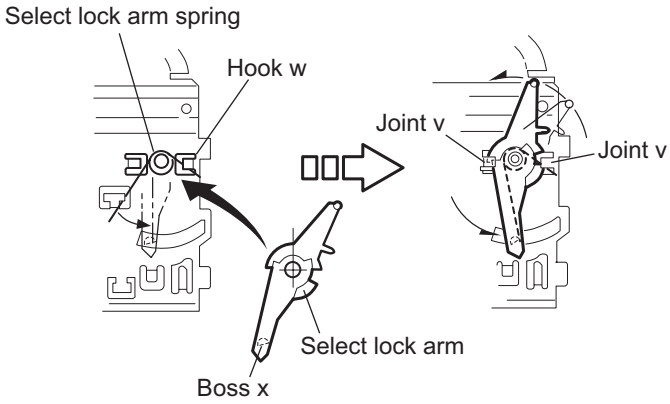


Fig.24

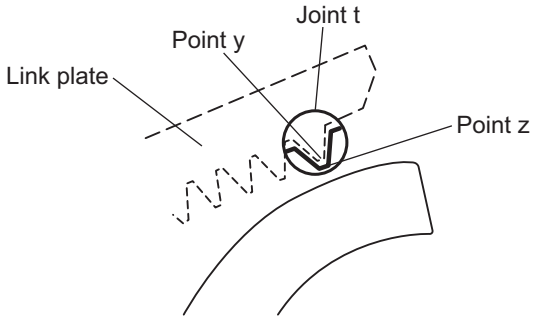


Fig.25

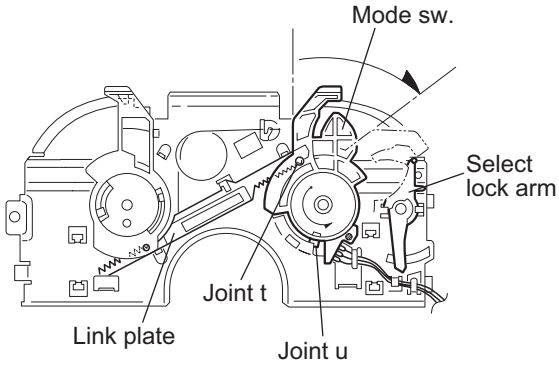


Fig.26

2.2.13 Removing the select arm R / link plate (See Figs.27 and 28)

- Prior to performing the following procedure, remove the top plate assembly.
  (1) Bring up the select arm **R** to release from the link plate (joint **a'**) and turn as shown in the figure to release the two joints **b'** and joint **c'**.
  (2) Move the link plate in the direction of the arrow to release the joint **d'**. Remove the link plate spring at the same time.

REFERENCE:

Before removing the link plate, remove the mode sw..

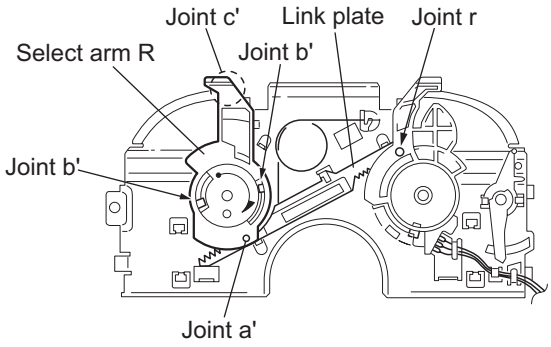


Fig.27

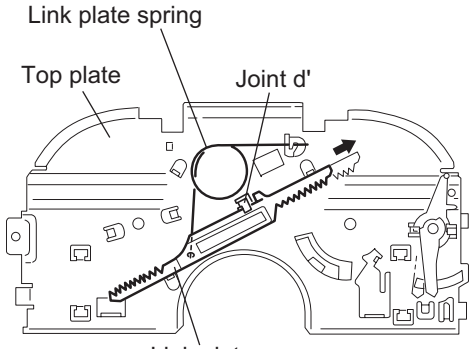


Fig.28

2.2.14 Reattaching the Select arm R / link plate (See Figs.29 and 30)

REFERENCE:

Reverse the above removing procedure.

(1) Reattach the link plate spring.
(2) Reattach the link plate to the link plate spring while joining them at joint **d'**.
(3) Reattach the joint **a'** of the select arm **R** to the first peak of the link plate while joining the two joints **b'** with the slots. Then turn the select arm **R** as shown in the figure. The top plate is joined to the joint **c'**.

CAUTION:

When reattaching the select arm R, check if the points **e'** and **f'** are correctly fitted and if each part operates properly.

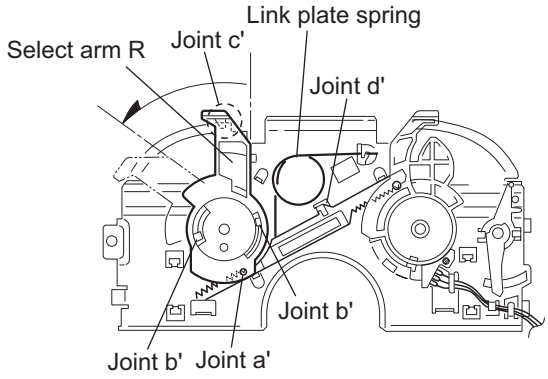


Fig.29

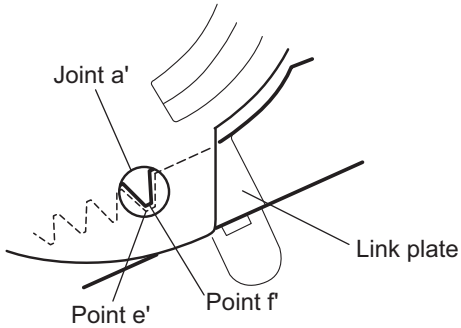


Fig.30

2.2.15 Removing the loading roller assembly (See Figs.31 to 33)

- Prior to performing the following procedure, remove the clamper assembly and top plate assembly.
  (1) Push inward the loading roller assembly on the gear side and detach it upward from the slot of the joint **g'** of the lock arm rivet assembly.
  (2) Detach the loading roller assembly from the slot of the joint **h'** of the lock arm rivet assembly.

      The roller guide comes off the gear section of the loading roller assembly.

      Remove the roller guide and the HL washer from the shaft of the loading roller assembly.
  (3) Remove the screw **J** attaching the lock arm rivet assembly.
  (4) Push the shaft at the joint **i'** of the lock arm rivet assembly inward to release the lock arm rivet assembly from the slot of the **L** side plate.
  (5) Extend the lock arm rivet assembly outward and release the joint **j'** from the boss of the chassis rivet assembly. The roller guide springs on both sides come off at the same time.

  CAUTION:
  When reassembling, reattach the left and right roller guide springs to the lock arm rivet assembly before reattaching the lock arm rivet assembly to the chassis rivet assembly. Make sure to fit the part k' of the roller guide spring inside of the roller guide. (Refer to Fig.34.)

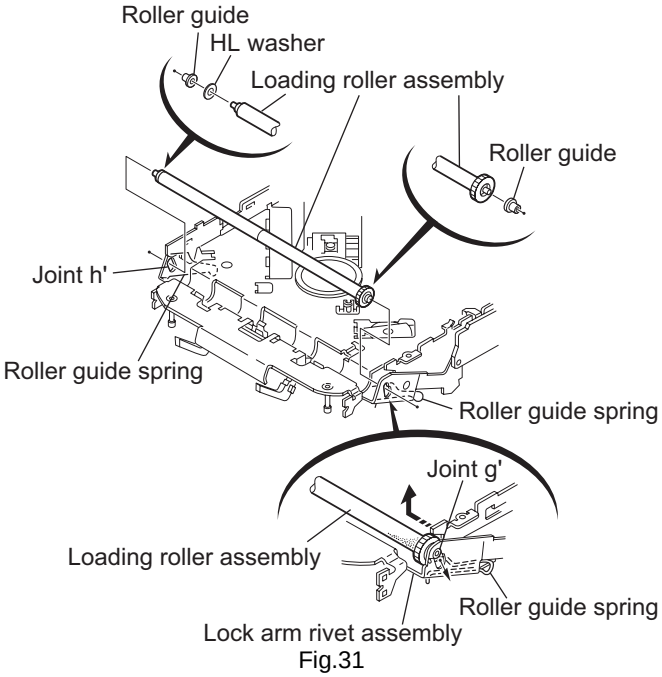


Fig.31

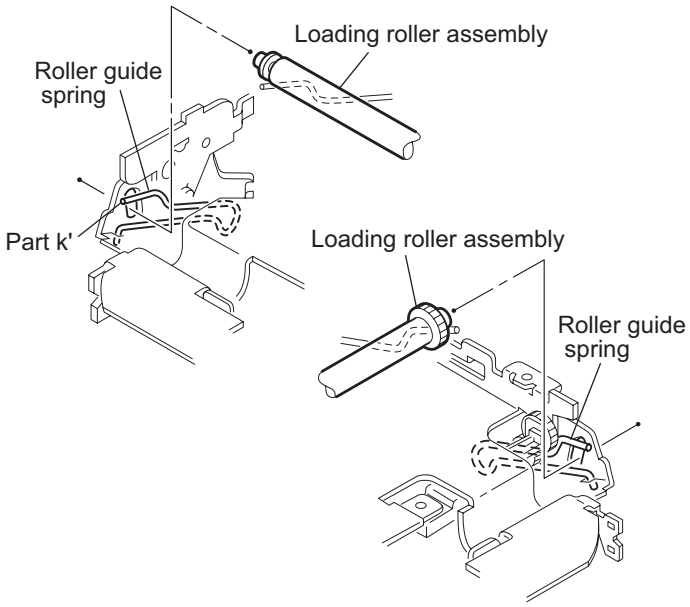


Fig.32

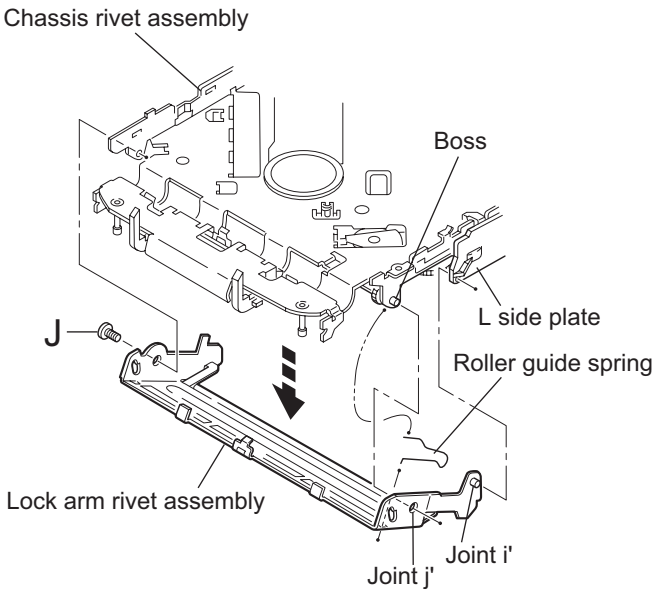


Fig.33

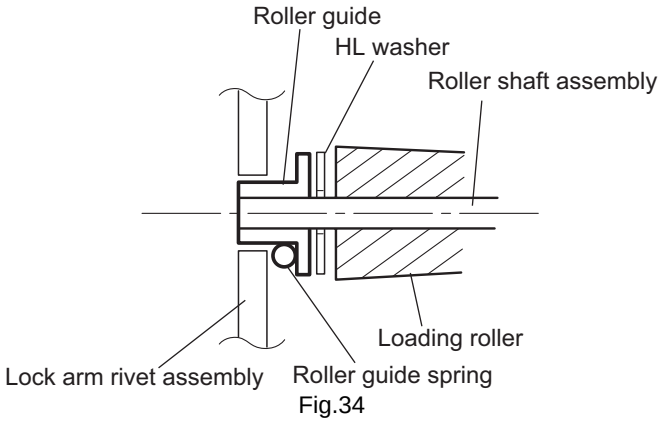


Fig.34

2.2.16 Removing the loading gear 5, 6 and 7 (See Figs.35 and 36)

- Prior to performing the following procedure, remove the top cover, chassis unit, pickup unit and top plate assembly.
  (1) Remove the screw **K** attaching the loading gear bracket. The loading gear 6 and 7 come off the loading gear bracket.
  (2) Pull out the loading gear 5.

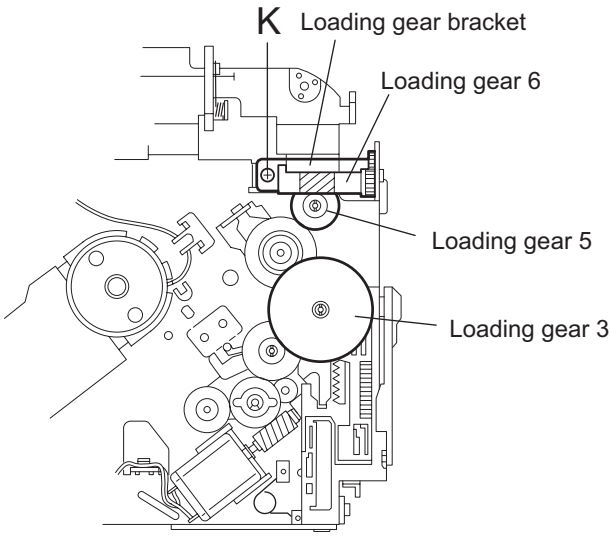


Fig.35

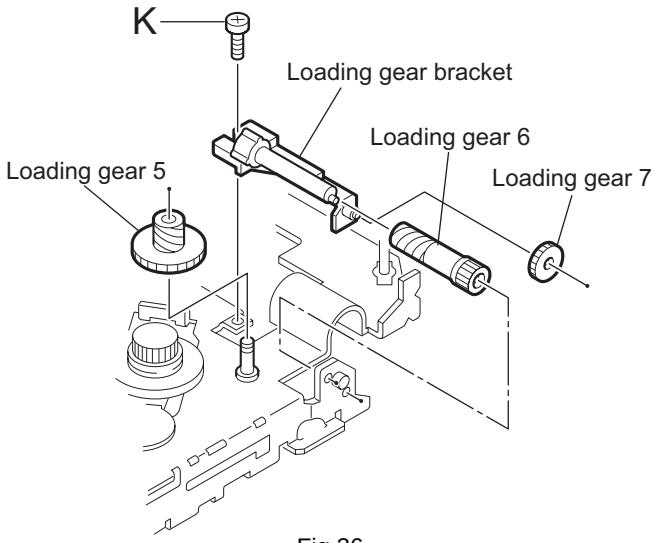


Fig.36

2.2.17 Removing the gears (See Figs.37 to 40)

- Prior to performing the following procedure, remove the top cover, chassis unit, top plate assembly and pickup unit.
- Pull out the loading gear 3. (See Fig.35.)

(1) Pull out the feed gear.
(2) Move the loading plate assembly in the direction of the arrow to release the **L** side plate from the two slots m' of the chassis rivet assembly. (See Fig.37.)
(3) Detach the loading plate assembly upward from the chassis rivet assembly while releasing the joint **n'**. Remove the slide hook and loading plate spring from the loading plate assembly.
(4) Pull out the loading gear 2 and remove the change lock lever.
(5) Remove the **E** ring and washer attaching the change gear 2.
(6) The change gear 2, change gear spring and adjusting washer come off.
(7) Remove the loading gear 1.
(8) Move the change plate rivet assembly in the direction of the arrow to release from the three shafts of the chassis rivet assembly upward. (See Fig.38.)
(9) Detach the loading gear plate rivet assembly from the shaft of the chassis rivet assembly upward while releasing the joint **p'**. (See Figs.38 and 40.)
(10) Pull out the loading gear 4.

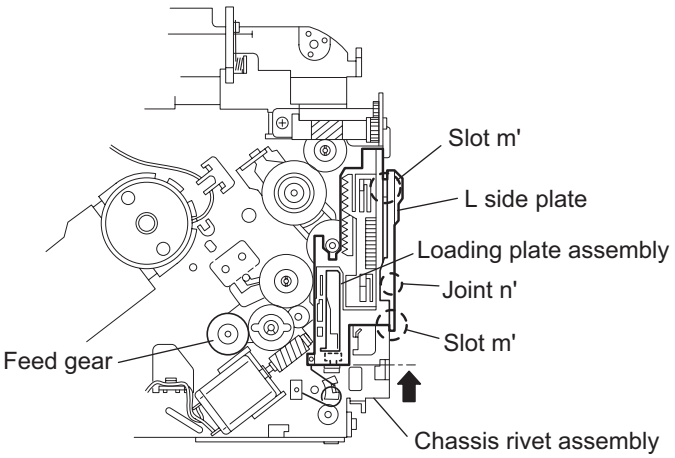


Fig.37

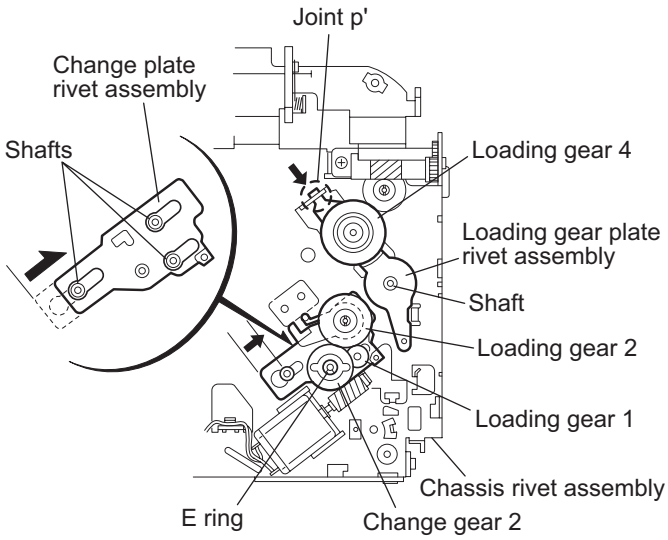


Fig.38

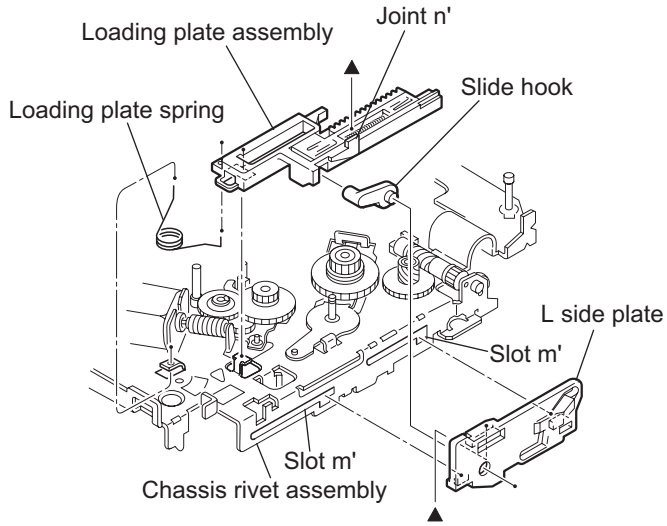


Fig.39

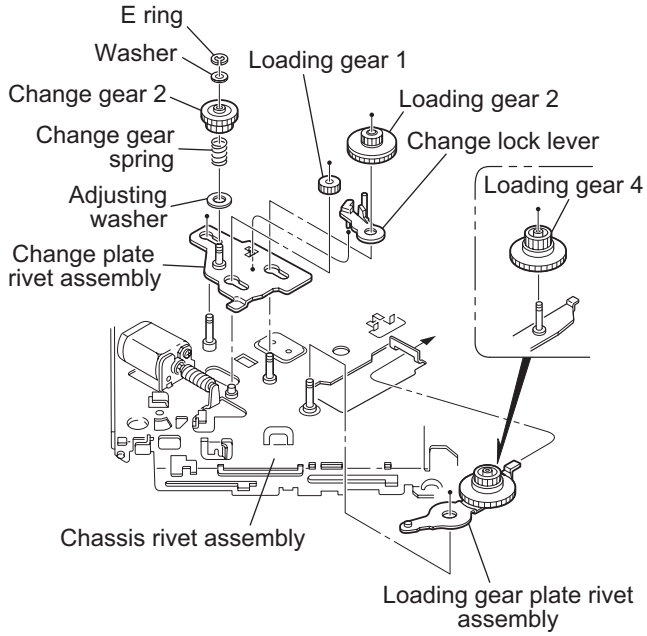


Fig.40

2.2.18 Removing the turn table / spindle motor (See Figs.41 and 42)

- Prior to performing the following procedure, remove the top cover, connector board, chassis unit and clamper assembly.
  (1) Remove the two screws **L** attaching the spindle motor assembly through the slot of the turn table on top of the body.
  (2) Unsolder the wire on the connector board if necessary.

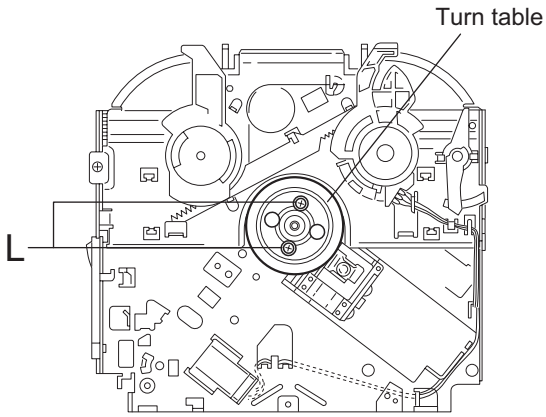


Fig.41

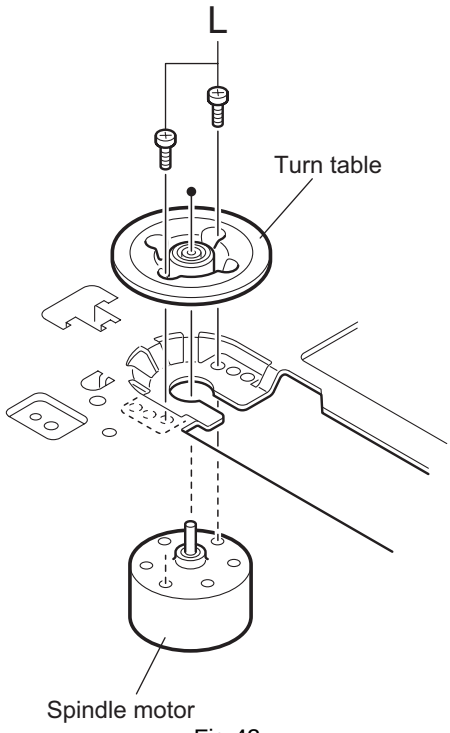


Fig.42

SECTION 3
Adjustment

3.1 Adjustment method

■ Test instruments required for adjustment
1. Digital oscilloscope (100MHz)
2. AM Standard signal generator
3. FM Standard signal generator
4. Stereo modulator
5. Electric voltmeter
6. Digital tester
7. Tracking offset meter
8. Test Disc JVC :CTS-1000
9. Extension cable for check
EXTSH002-22P× 1

■ Standard volume position
Balance and Bass &Treble volume : Indication "0"
Loudness : OFF

■ Frequency Band
FM 87.5MHz to 107.9MHz
AM 530kHz to 1710kHz

■ Dummy load
Exclusive dummy load should be used for AM, and FM. For FM dummy load, there is a loss of 6dB between SSG output and antenna input. The loss of 6dB need not be considered since direct reading of figures are applied in this working standard.

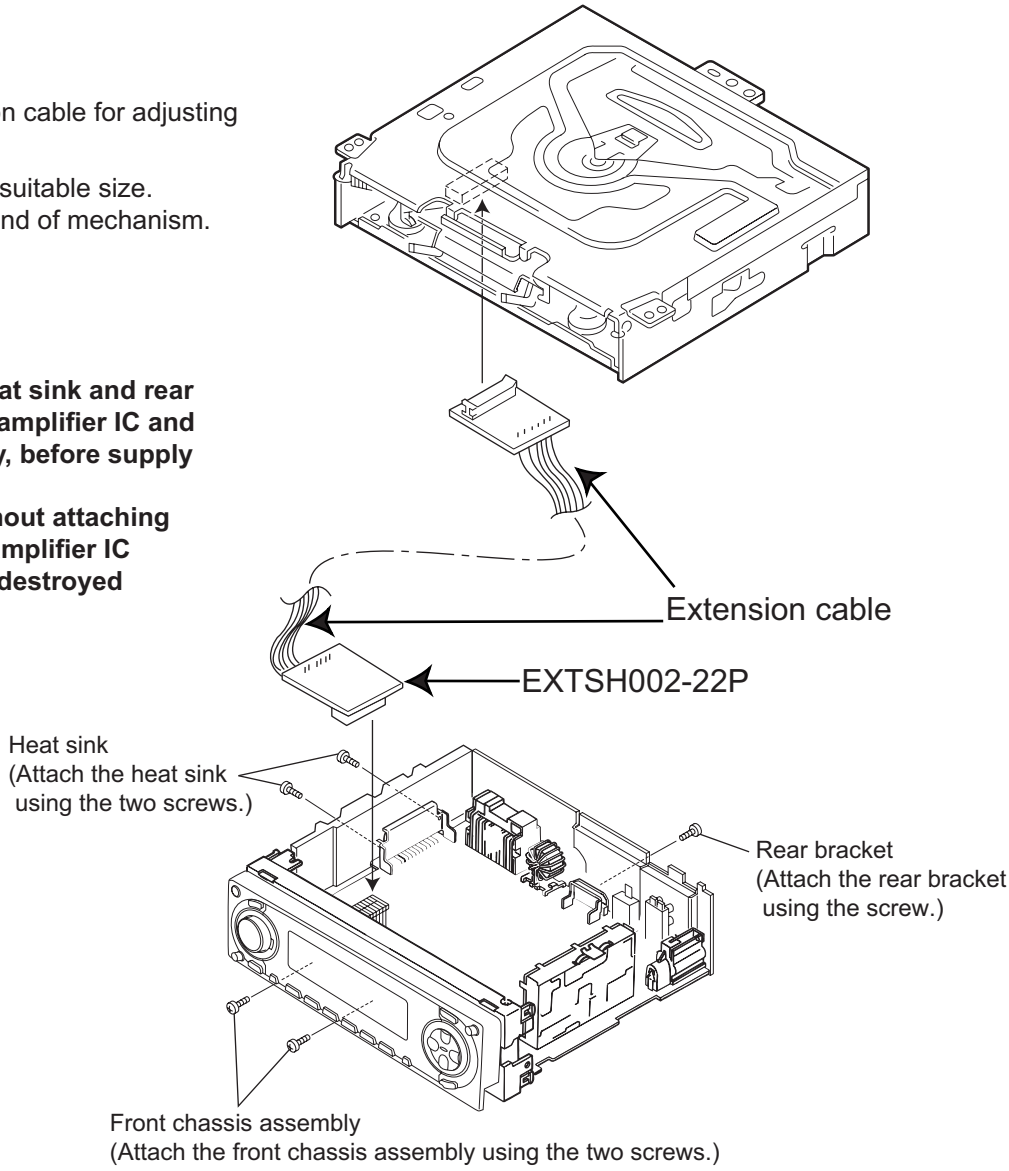
■ Standard measuring conditions

Power supply voltage	DC14.4V(11 to 16V)
Load impedance	20Kohm(2 Speakers connection)
Output Level	Line out 2.0V (Vol. MAX)

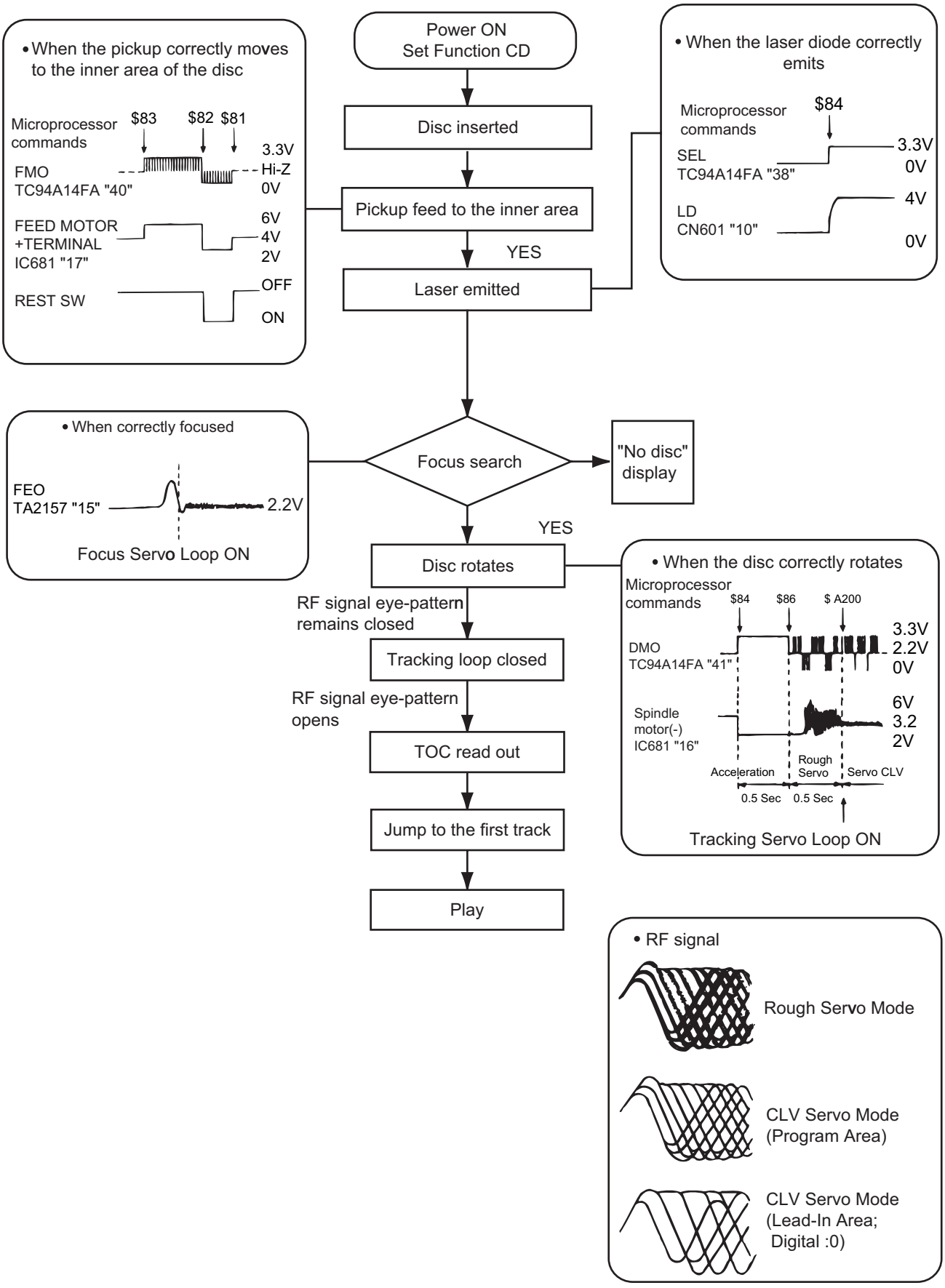
■ How to connect the extension cable for adjusting

* The cardboard is cut in a suitable size.
uses for the insulation stand of mechanism.

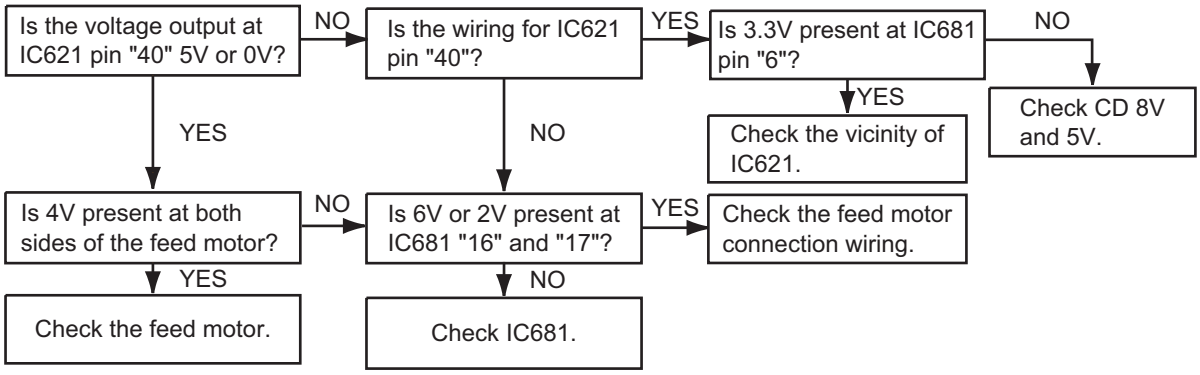
Caution:
Be sure to attach the heat sink and rear bracket onto the power amplifier IC and regulator IC respectively, before supply the power.
If voltage is applied without attaching these parts, the power amplifier IC and regulator IC will be destroyed by heat.


Extension cable
EXTSH002-22P
Heat sink
(Attach the heat sink using the two screws.)
Rear bracket
(Attach the rear bracket using the screw.)
Front chassis assembly
(Attach the front chassis assembly using the two screws.)

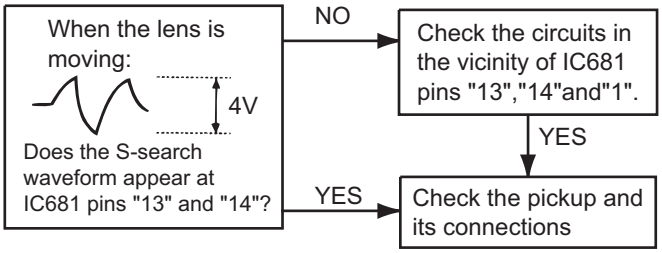
3.2 Flow of functional operation unit TOC read



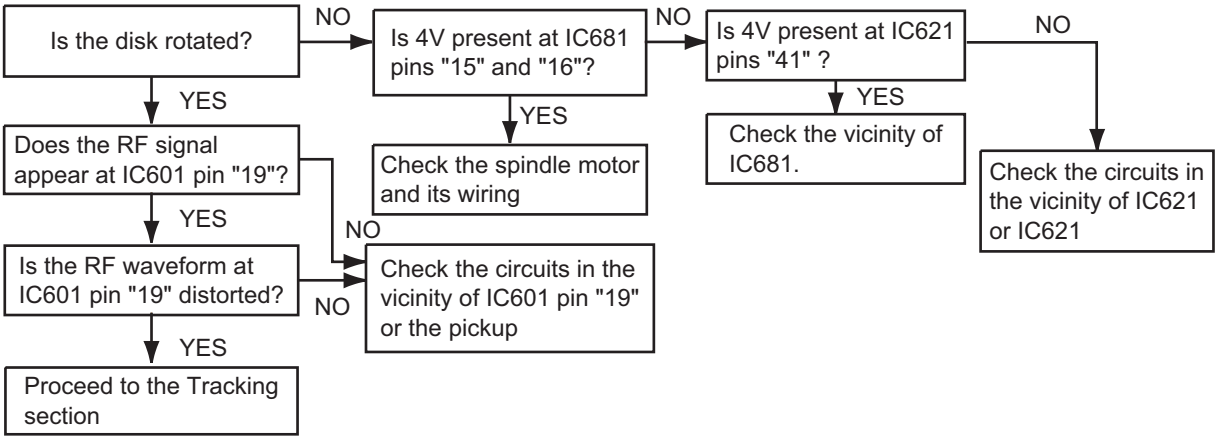
3.2.1 Feed section



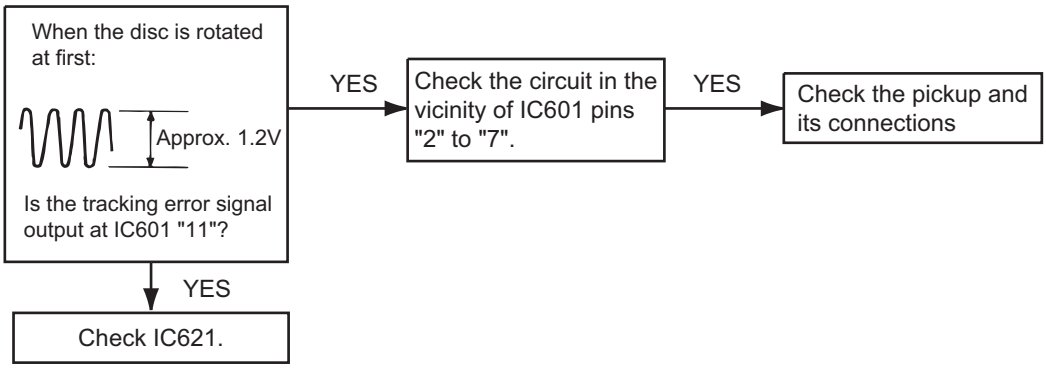
3.2.2 Focus section


When the lens is moving:
4V
Does the S-search waveform appear at IC681 pins "13" and "14"?
NO
Check the circuits in the vicinity of IC681 pins "13","14"and"1".
YES
YES
Check the pickup and its connections

3.2.3 Spindle section


Is the disk rotated?
NO
Is 4V present at IC681 pins "15" and "16"?
NO
Is 4V present at IC621 pins "41" ?
NO
YES
YES
YES
Check the vicinity of IC681.
Check the circuits in the vicinity of IC621 or IC621
Does the RF signal appear at IC601 pin "19"?
Check the spindle motor and its wiring
YES
NO
Is the RF waveform at IC601 pin "19" distorted?
Check the circuits in the vicinity of IC601 pin "19" or the pickup
NO
YES
Proceed to the Tracking section

3.2.4 Tracking section

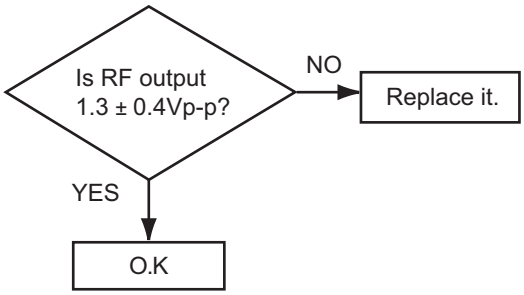

When the disc is rotated at first:
Approx. 1.2V
Is the tracking error signal output at IC601 "11"?
YES
Check the circuit in the vicinity of IC601 pins "2" to "7".
YES
Check the pickup and its connections
YES
Check IC621.

3.3 Maintenance of laser pickup

(1) Cleaning the pick up lens
Before you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

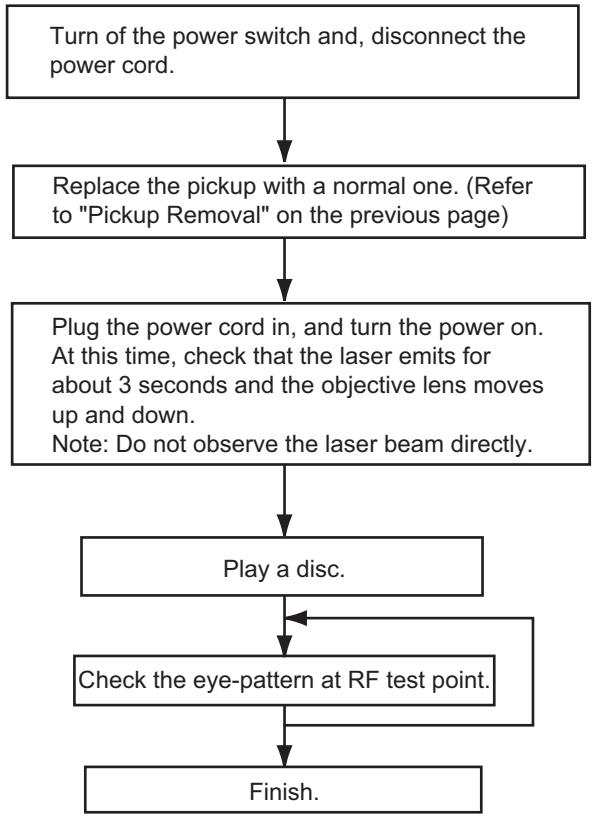
(2) Life of the laser diode
When the life of the laser diode has expired, the following symptoms will appear.

- The level of RF output (EFM output:ampli tude of eye pattern) will be low.



(3) Semi-fixed resistor on the APC PC board
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power.Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor. If the laser power is lower than the specified value,the laser diode is almost worn out, and the laser pickup should be replaced. If the semi-fixed resistor is adjusted while the pickup is functioning normally,the laser pickup may be damaged due to excessive current.

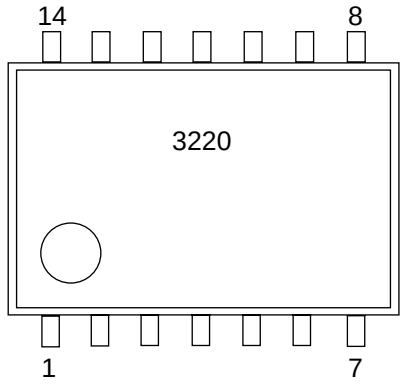
3.4 Replacement of laser pickup


Turn of the power switch and, disconnect the power cord.
Replace the pickup with a normal one. (Refer to "Pickup Removal" on the previous page)
Plug the power cord in, and turn the power on. At this time, check that the laser emits for about 3 seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.
Play a disc.
Check the eye-pattern at RF test point.
Finish.

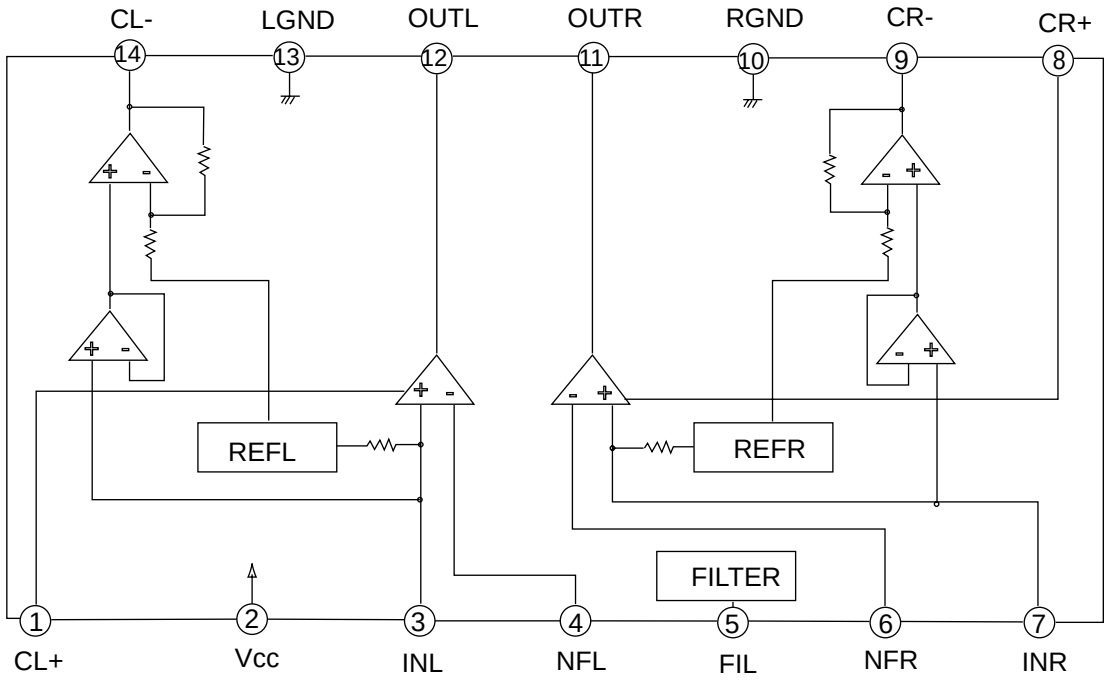
SECTION 4
Description of major ICs

4.1 BA3220FV-X (IC281, IC301) : Line out amplifier

- Pin layout

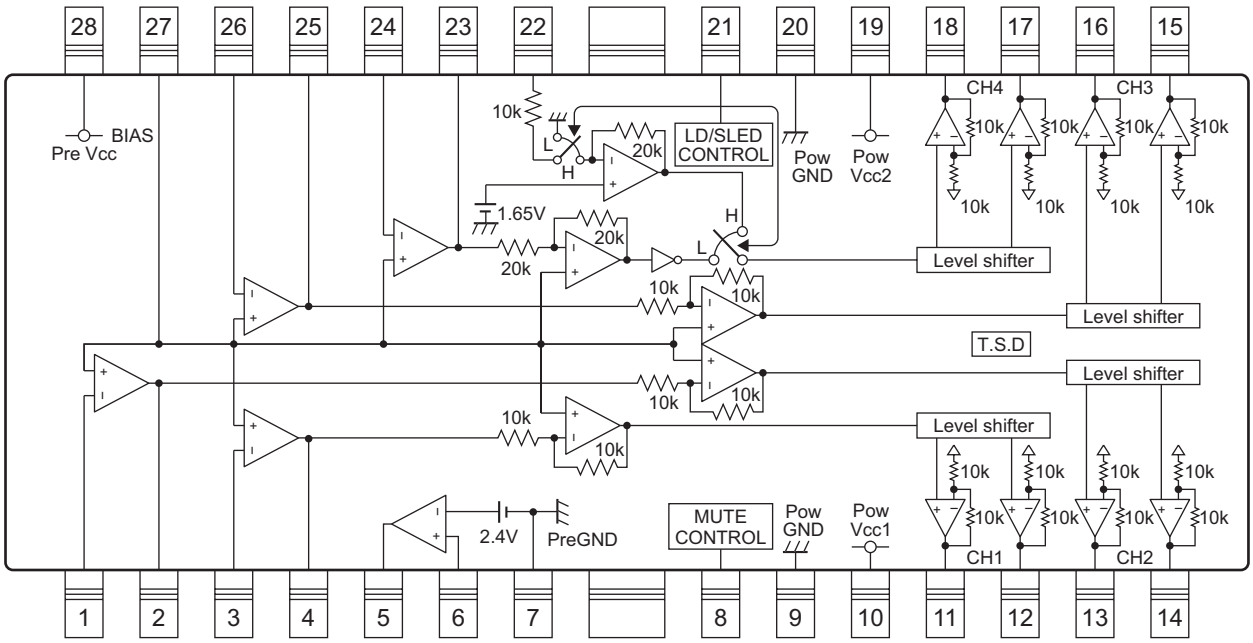


- Block diagram



4.2 BA5830FP-X (IC681) : Power driver

- Pin layout & Block diagram



T.S.D : thermal shutdown
Unit of resistance : [Ω]

- Pin function

Pin No.	Symbol	Function
1	OPIN2(-)	CH2 Pre OP amplifier invert input
2	OPOUT2	CH2 Pre OP amplifier output
3	OPIN1(-)	CH1 Pre OP amplifier invert input
4	OPOUT1	CH1 Pre OP amplifier output
5	REG-B	Connect to external Tr Base
6	REG(+)	Regulator terminal of output feedback
7	PreGND	Pre Block and Regulator GND
8	MUTE	Mute terminal
9	PowGND	Power Block GND
10	PowVcc1	CH1, 2 Power Block Vcc
11	VO1(-)	Driver CH1 negative output
12	VO1(+)	Driver CH1 positive output
13	VO2(-)	Driver CH2 negative output
14	VO2(+)	Driver CH2 positive output

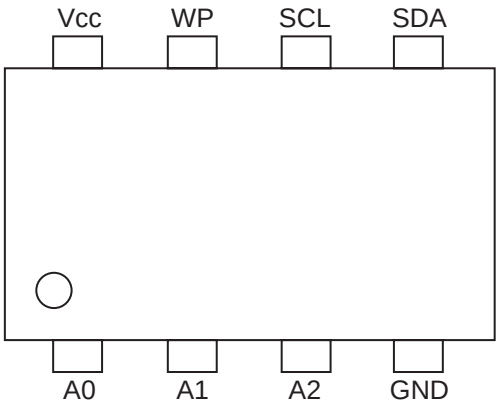
Pin No.	Symbol	Function
15	VO3(+)	Driver CH3 positive output
16	VO3(-)	Driver CH3 negative output
17	VO4(+)	Driver CH4 positive output
18	VO4(-)	Driver CH4 negative output
19	PowVcc2	CH3, 4 Power Block VCC
20	PowGND	Power Block GND
21	CNT	Control terminal
22	LDIN	Loading input
23	OPOUTSL	SLED Pre OP amplifier output
24	OPINSL(-)	SLED Pre OP amplifier invert input
25	OPOUT3	CH3 Pre OP amplifier output
26	OPIN3(-)	CH3 Pre OP amplifier invert input
27	BIAS	BIAS input
28	PreVcc	Pre-Block VCC

NOTE:

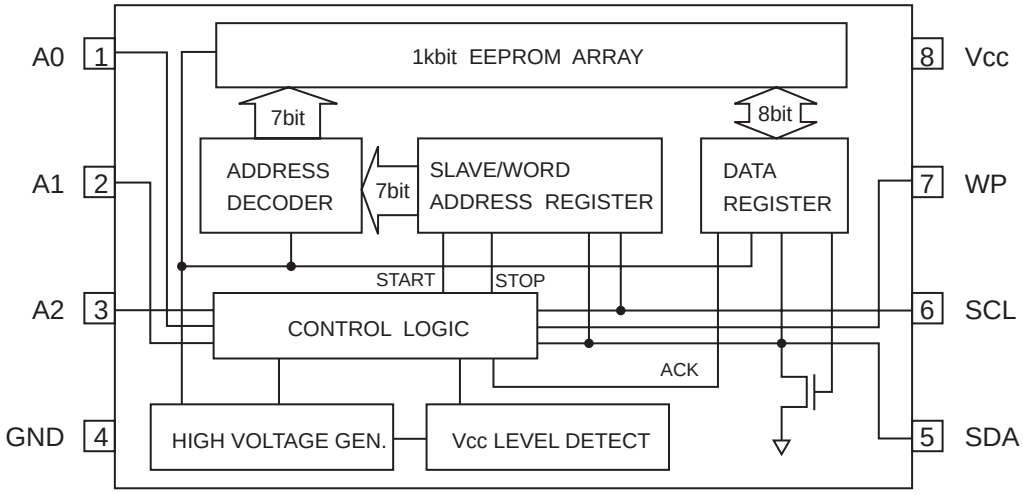
When PIN2,4,22,25 is high ("H"), the positive output pin of the driver is high ("H") and the negative output pin is low ("L").
When PIN23 is high ("H"), the positive output pin of CH4 is low ("L") and negative output pin is high ("H").

4.3 BR24C01AFV-W-X (IC502) : EEPROM

- Pin layout



- Block diagram



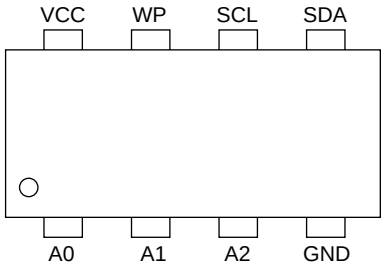
- Pin function

Pin name	I/O	Description
Vcc	-	Power supply
GND	-	Ground (0v)
A0, A1, A2	IN	Slave address set
SCL	IN	Serial clock input
SDA	IN / OUT	Slave and word addressserial data input serial data output *1
WP	IN	Write protect input

*1 An open drain output requires a pull-up resister.

4.4 BR24C16F-X (IC703) : EEPROM

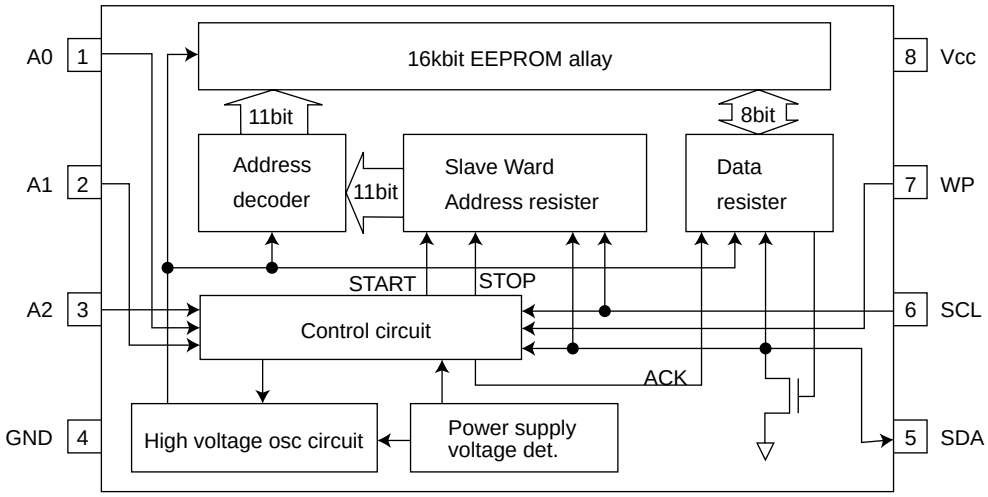
- Pin layout



- Pin function

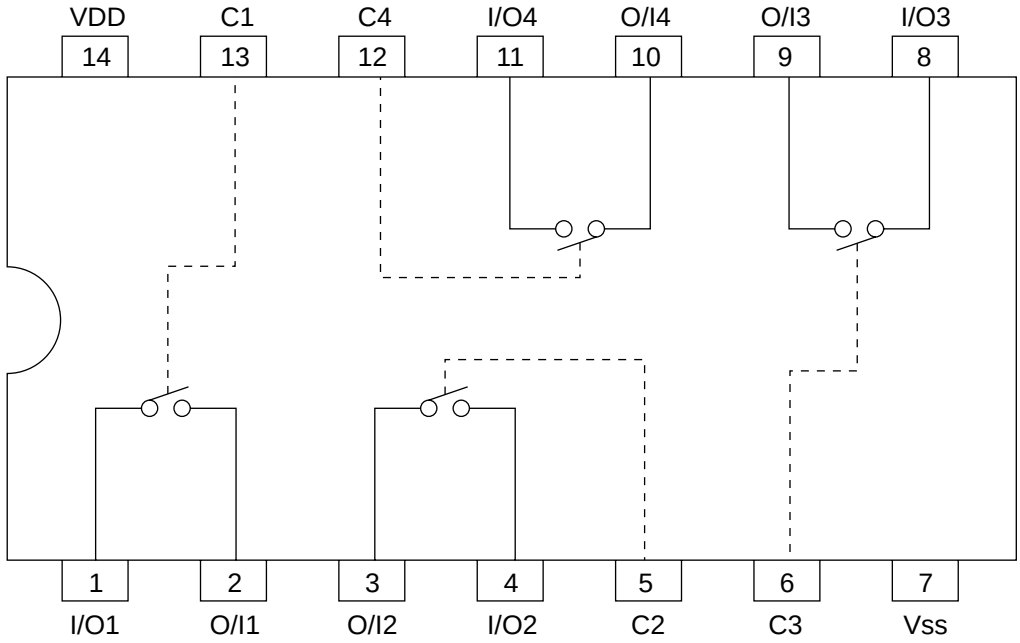
Symbol	I/O	Function
VCC	-	Power supply.
GND	-	GND
A0, A1, A2	I	No use connect to GND.
SCL	I	Serial clock input.
SDA	I/O	Serial data I/O of slave and ward address.
WP	I	Write protect terminal.

- Block diagram



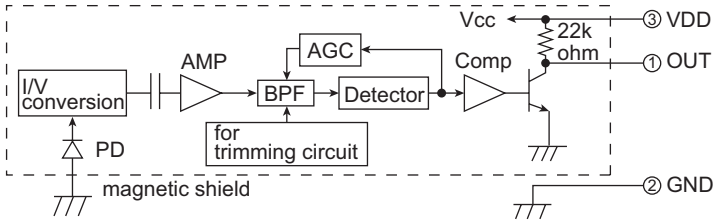
4.5 BU4066BCFV-X (IC131) : Quad analog switch

- Pin layout & Block diagram



4.6 RPM6938-SV4 (IC805) : Remote control receiver

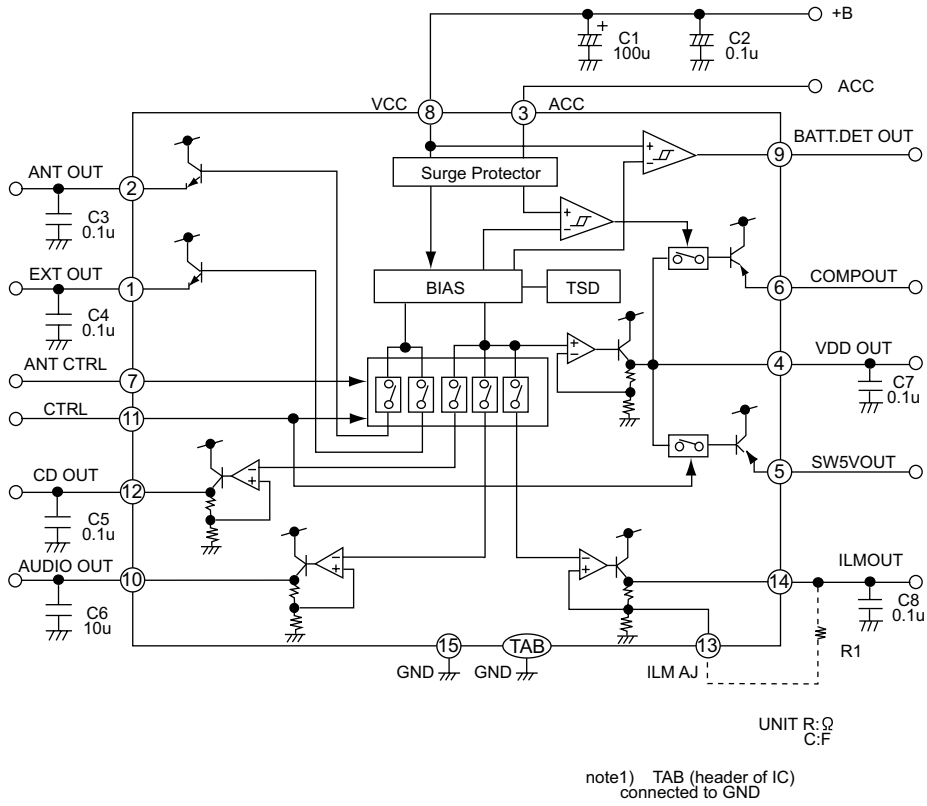
- Block diagram



4.7 HA13164A (IC901) : Regulator

- Pin layout

- Block diagram

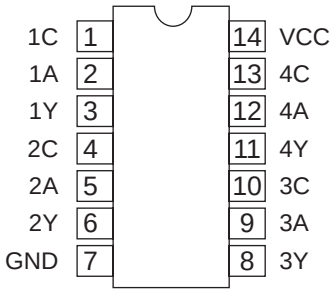


- Pin function

Pin No.	Symbol	Function
1	EXTOUT	Output voltage is VCC-1 V when M or H level applied to CTRL pin.
2	ANTOUT	Output voltage is VCC-1 V when M or H level to CTRL pin and H level to ANT-CTRL.
3	ACCIN	Connected to ACC.
4	VDDOUT	Regular 5.7V.
5	SW5VOUT	Output voltage is 5V when M or H level applied to CTRL pin.
6	COMPOUT	Output for ACC detector.
7	ANT CTRL	L:ANT output OFF, H:ANT output ON
8	VCC	Connected to VCC.
9	BATT DET	Low battery detect.
10	AUDIO OUT	Output voltage is 9V when M or H level applied to CTRL pin.
11	CTRL	L:BIAS OFF, M:BIAS ON H:CD ON
12	CD OUT	Output voltage is 8V when H level applied to CTRL pin.
13	ILM AJ	Adjustment pin for ILM output voltage.
14	ILM OUT	Output voltage is 10V when M or H level applied to CTRL pin.
15	GND	Connected to GND.

4.8 HD74HC126FP-X (IC781) : Buffer

- Pin layout

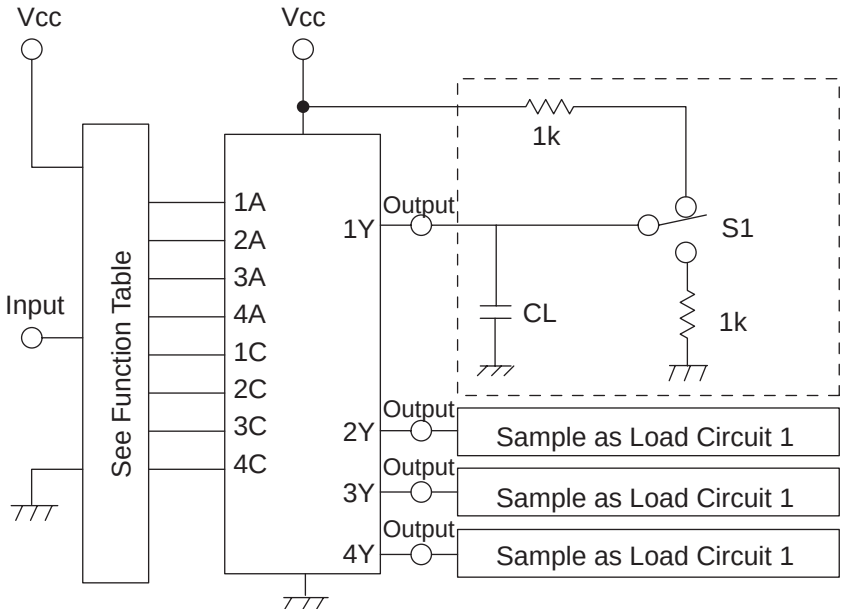


- Pin function

Input		Output
C	A	Y
L	X	Z
H	L	H
H	H	L

Note:
H:High level
L:Low level
X:Irrelevant
Z:Off(High-impedance)
State a 3-state input

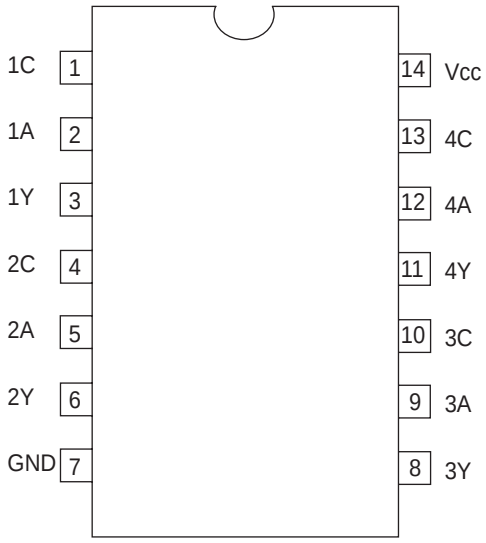
- Block diagram



Note:
CL includes probe and jig capacitance

4.9 HD74HCT126T-X (IC503) : Buffer

- Pin layout

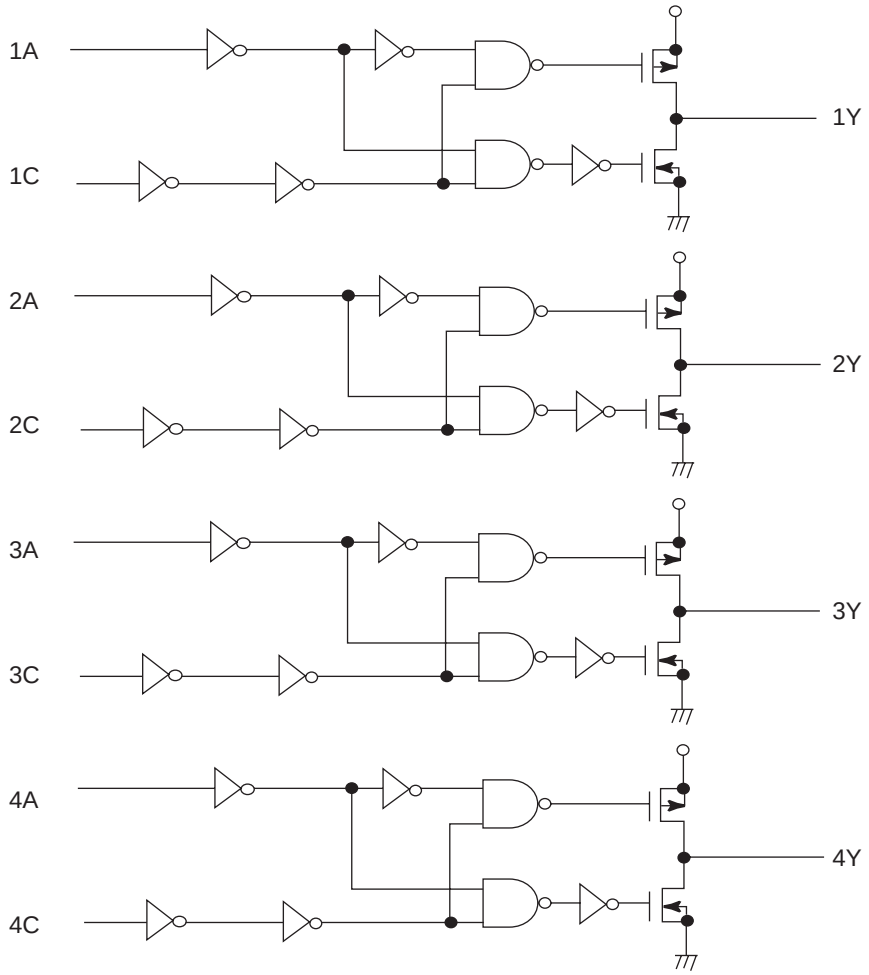


- Pin function

Input		Output
C	A	Y
L	X	Z
H	L	L
H	H	H

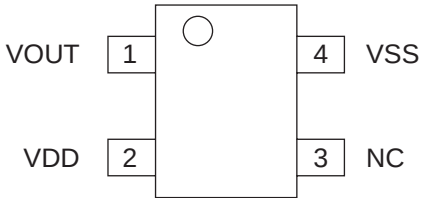
H : High level
L : Low level
X : Irrelevant
Z : Off (Hhigh-impedance)state of a 3-stage output

- Block diagram

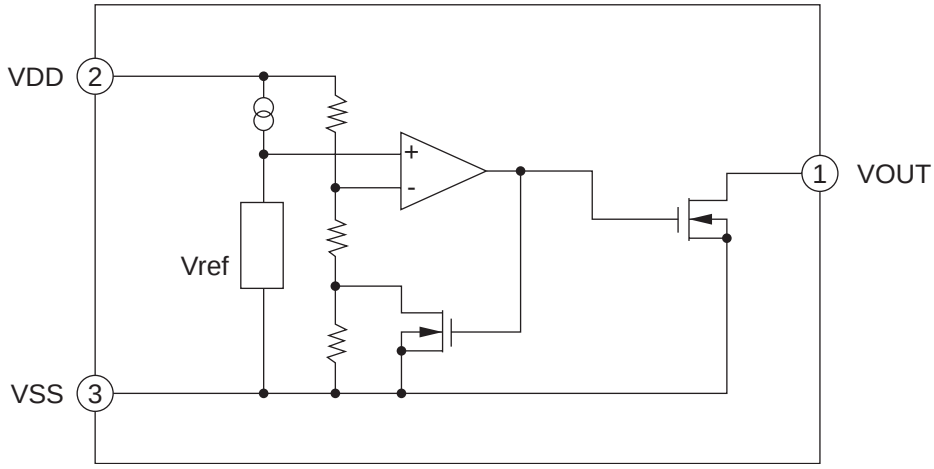


4.10 IC-PST3424U-X (IC803) : Reset

- Pin layout



- Block diagram

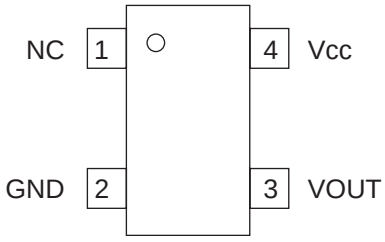


- Pin function

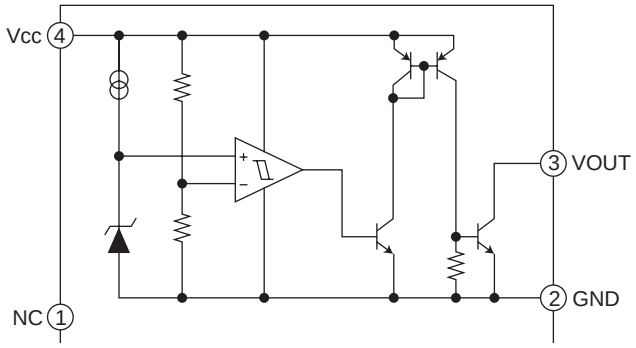
No.	Pin Name	Function
1	Vout	Reset Signal Output PIN
2	VDD	VDD PIN / Voltage Detect PIN
3	NC	Non connect
4	VSS	VSS PIN

4.11 IC-PST9333U-X (IC702) : Regulator

- Pin layout



- Block diagram

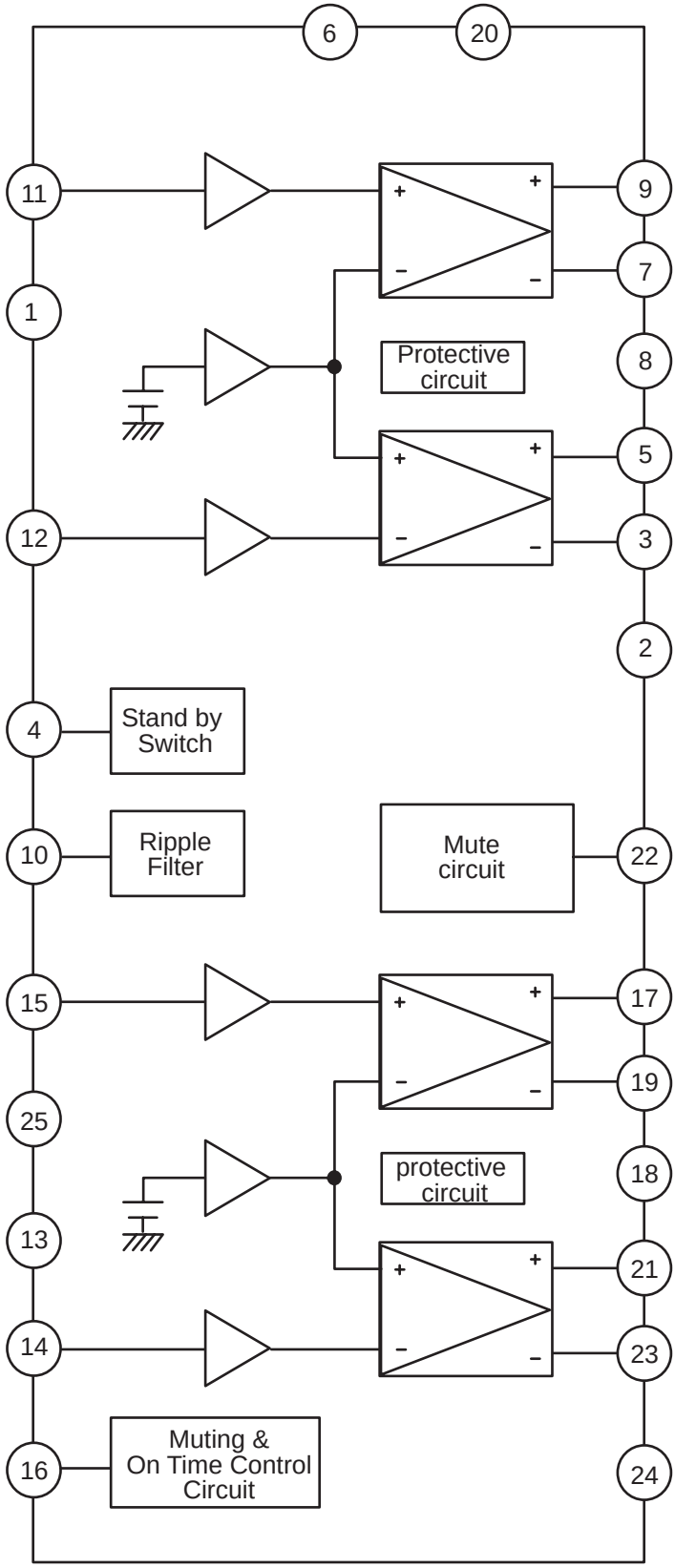


- Pin function

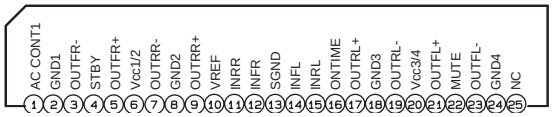
Pin No.	Symbol	Function
1	NC	Non connect
2	GND	GND terminal
3	VOUT	Reset signal output terminal
4	Vcc	Vcc terminal/Voltage detect terminal

4.12 LA47505 (IC951) : Power amp.

- Block diagram



- Pin layout

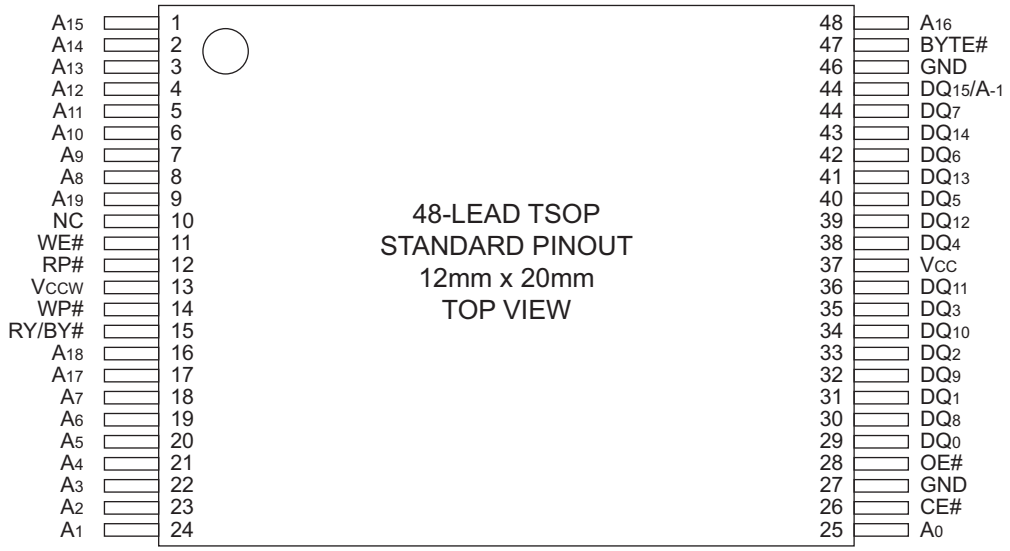


- Pin function

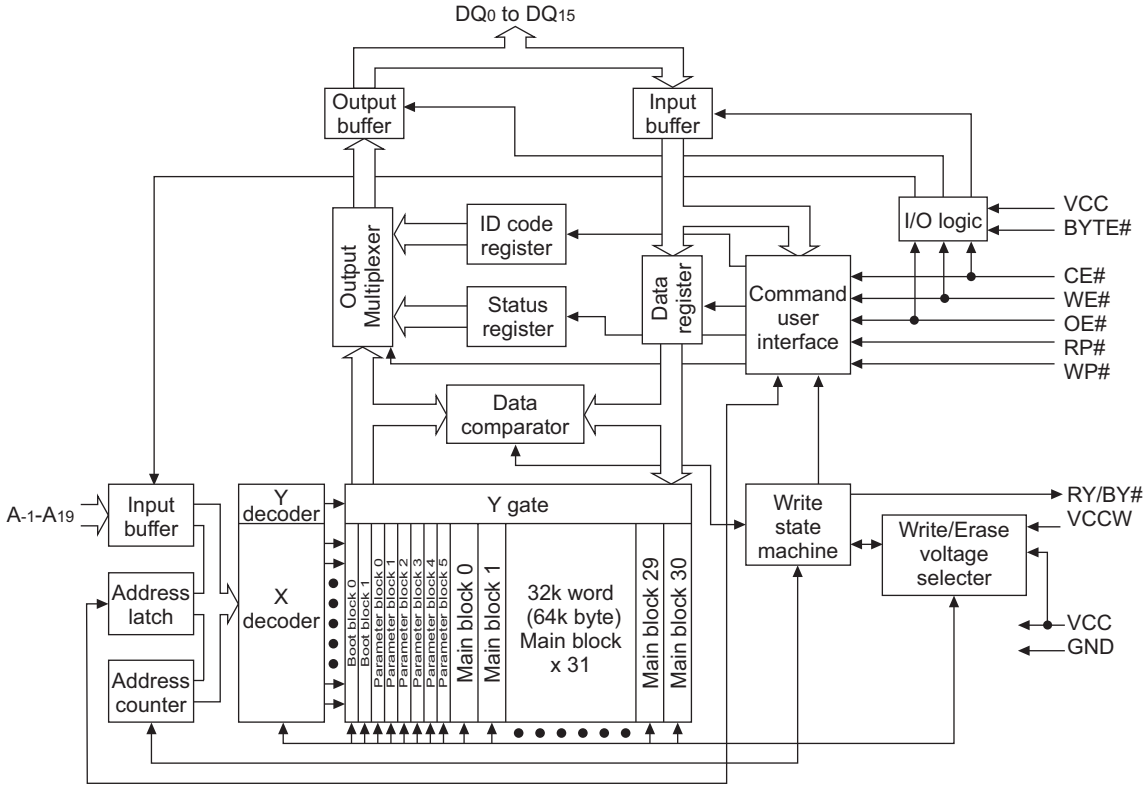
Pin No.	Symbol	Function
1	AC CONT1	Header of IC
2	GND1	Power GND
3	OUTFR-	Outpur(-) for front Rch
4	STBY	Stand by input
5	OUTFR+	Output (+) for front Rch
6	Vcc1/2	Power input
7	OUTRR-	Output (-) for rear Rch
8	GND2	Power GND
9	OUTRR+	Output (+) for rear Rch
10	VREF	Ripple filter
11	INRR	Rear Rch input
12	INFR	Front Rch input
13	SGND	Signal GND
14	INFL	Front Lch input
15	INRL	Rear Lch input
16	ONTIME	Power on time control
17	OUTRL+	Output (+) for rear Lch
18	GND3	Power GND
19	OUTRL-	Output (-) for rear Lch
20	Vcc3/4	Power input
21	OUTFL+	Output (+) for front
22	MUTE	Muting control input
23	OUTFL-	Output (-) for front
24	GND4	Power GND
25	NC	No connection

4.13 LH28F160BJHET92 (IC802) : 16M flash memory

- Pin layout



- Block diagram

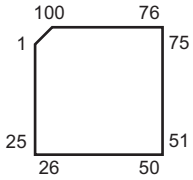


• Pin function

Pin No.	Symbol	I/O	Function
1 to 8	A_{15} to A_8	I	Address input for memory address
9	A_{19}	I	Address input for memory address
10	NC	-	Non connection
11	WE#	I	Write enable
12	RP#	I	Reset
13	VCCW	-	Power supply for write/erase
14	WP#	I	Write protect
15	RY/BY#	O	Ready/Busy
16,17	A_{18},A_{17}	I	Address input for memory address
18 to 25	A_7 to A_0	I	Address input for memory address
26	CE#	I	Chip enable
27	GND	-	Ground
28	OE#	I	Output enable
29	DQ_0	I/O	Data input/output
30	DQ_8	I/O	Data input/output
31	DQ_1	I/O	Data input/output
32	DQ_9	I/O	Data input/output
33	DQ_2	I/O	Data input/output
34	DQ_{10}	I/O	Data input/output
35	DQ_3	I/O	Data input/output
36	DQ_{11}	I/O	Data input/output
37	VCC	-	Power supply
38	DQ_4	I/O	Data input/output
39	DQ_{12}	I/O	Data input/output
40	DQ_5	I/O	Data input/output
41	DQ_{13}	I/O	Data input/output
42	DQ_6	I/O	Data input/output
43	DQ_{14}	I/O	Data input/output
44	DQ_7	I/O	Data input/output
45	DQ_{15}	I/O	Data input/output
	A_{-1}	I	Address input for memory address
46	GND	-	Ground
47	BYTE#	I	Byte enable
48	A_{16}	I	Address input for memory address

4.14 MN102H60KCG (IC801) : LCD display sub CPU

- Pin layout



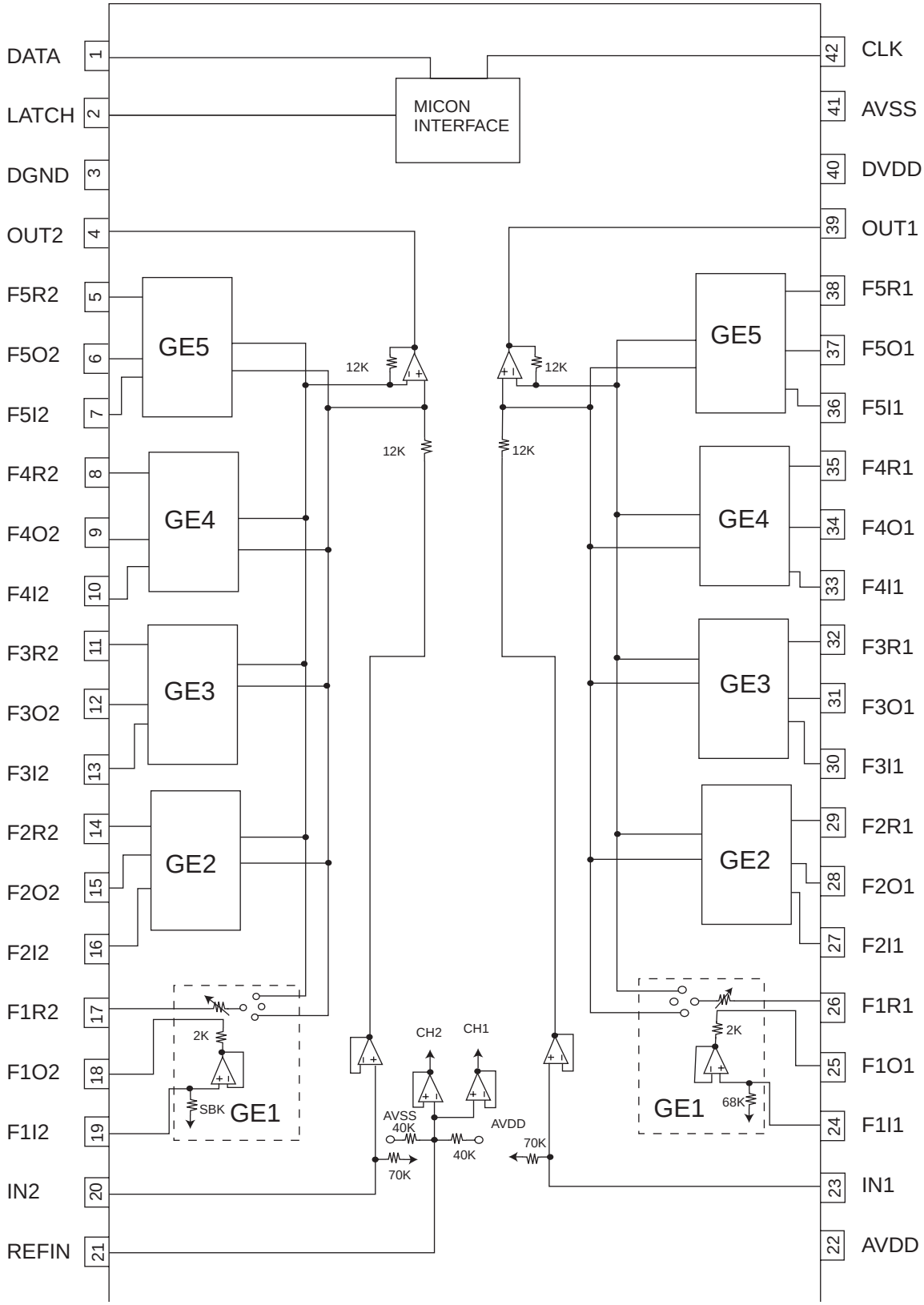
- Pin function

Pin No.	Symbol	I/O	Function
1	RES	O	LCD reset output
2	RE	O	Read enable output for extension memory
3	WE	O	Write enable output for extension memory
4	VccWCNT	O	Writing voltage control for external ROM
5	RY/BY	I	Read/Busy input for extension memory
6	CS1	O	Chip select1 output for extension memory
7	NC	O	Not use
8	SWLED4	O	SW_LED flashing output 4 for [PRESET1-6] key LED
9	SWLED5	O	SW_LED flashing output 5 for [SEEKUP]+[SEEKDOWN] key LED
10	SWLED6	O	SW_LED flashing output 6 for [DISCUP]+[DISCDOWN] key LED
11	NC	O	Not use
12	/WORD	I	Bus width setting for extension memory (H: 8-bit width)
13 to 16	A0 to A3	O	Extension memory output 0 to 3
17	VDD	-	Power supply
18	NC	O	Base clock output
19	GND	-	Ground
20	XI	I	Connect to ground
21	NC	O	Not connect
22	VDD	-	Power supply
23	OSCI	I	Crystal connecting terminal (25MHz)
24	OSCO	O	Crystal connecting terminal (25MHz)
25	MODE	I	Mode setting input, pull up (H: memory extension mode)
26 to 33	A4 to A11	O	Extension memory output 4 to 11
34	AVDD	-	Analog power supply
35 to 42	A12 to A19	O	Extension memory output 12 to 19
43	VREF-	-	Analog reference power supply, connect to ground
44	A20	O	Extension memory output 20
45	Thermal	I	Thermal fuse input
46	ANA	I	Audio level input for spectrum analyzer
47	WDOUT	O	Watch dog timer over flow output (H: over flow)
48	PON	O	Power on output
49	RD	O	LCD read strobe output
50	LCDCLK	O	LCD driver clock output (300kHz)
51	WR	O	LCD write strobe output
52,53	NC	-	Not use
54	VREF+	-	Analog reference power supply, connect to AVDD
55	RS	O	LCD regist select output

Pin No.	Symbol	I/O	Function
56	CS	O	LCD chip select output
57	NC	O	Not use
58	VOL1	I	Rotary encoder input 1
59	VOL2	I	Rotary encoder input 2
60	NC	-	Not use
61	AGND	-	Analog ground
62 to 65	KEY0 to KEY3	I	Key 0 to 3 input AD terminal
66	VDD	-	Power supply
67	SWLED0	O	SW_LED flashing output 0 for [VOL] key LED
68	SWLED1	O	SW_LED flashing output 1 for [SEL] key LED
69	SWLED2	O	SW_LED flashing output 2 for [DISP] key LED
70	DISPCLK	I	Serial communication clock input
71	DISPDATA	I	Displaying data input (Serial)
72	KEYDATA	O	Key code data output (Serial)
73	SIFDA	I/O	On board serial writing data input/output, pull up
74	SIFCK	I	On board serial writing clock input, pull up
75	NMI	I	NMI (H fix)
76	DISPCE	I	Chip enable input for serial communication
77		-	Ground
78	PSAVE2	I	POWER SAVE2 (Memory power supply off) detecting input
79	NC	-	Not use
80	KEY_IN	I	Key interrupt input
81	ADSEP	I	Address data separate/common mode setting terminal H: separate mode
82	RESET	I	Reset input (L: reset)
83	VDD	-	Power supply terminal
84 to 91	D0 to D7	I	Extension memory input 0 to 7
92	GND	-	Ground
93 to 100	P10 to P17	I	LCD data bus input/output 0 to 7

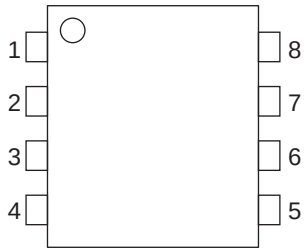
4.15 M62449FP-X (IC912) : Equalizer

- Pin layout



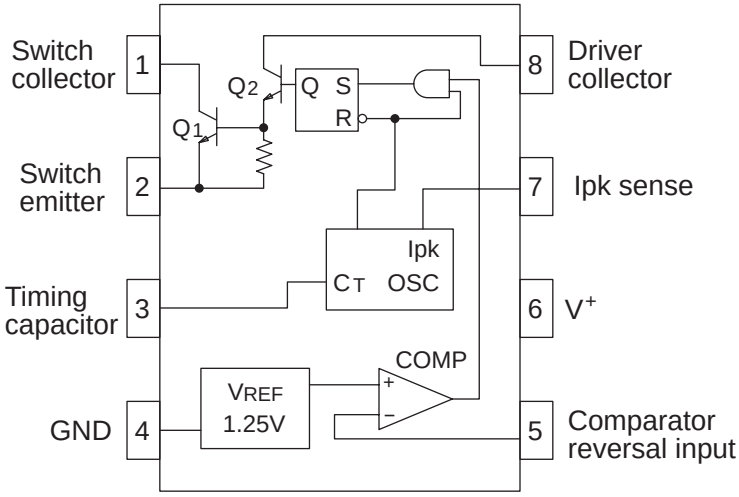
4.16 NJM2360AM-X (IC921) : DC-DC convertor

- Pin layout



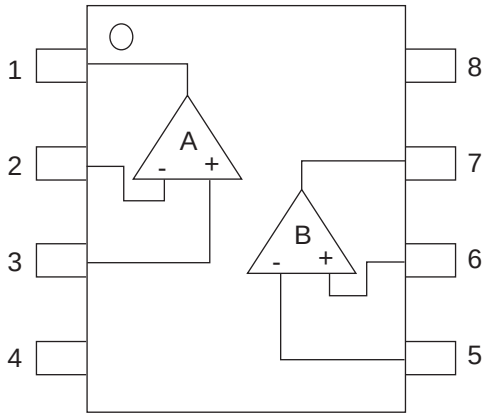
1. Cs
2. Es
3. CT
4. GND
5. INVIN
6. Vcc
7. SI
8. CD

- Block diagram



4.17 NJM4565V-X (IC132, IC572) : Dual operational amplifier

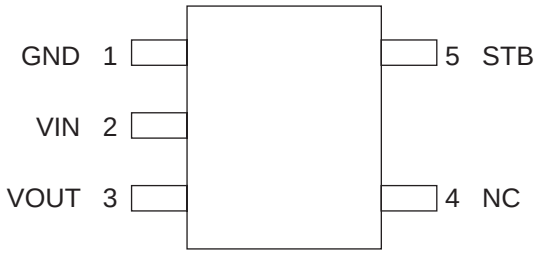
- Pin layout & Block diagram



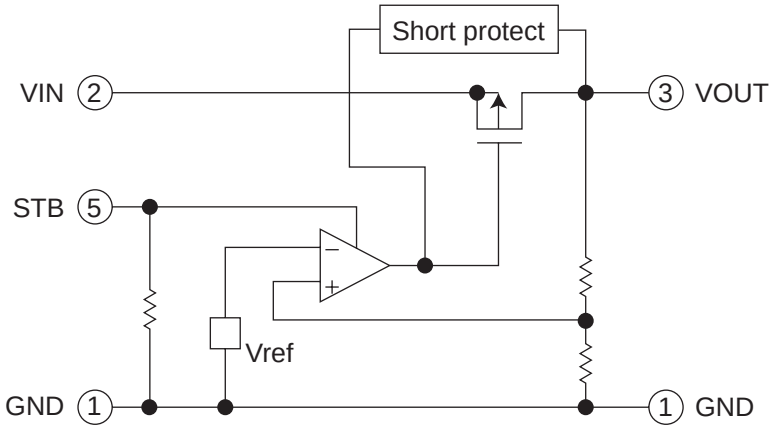
1 AOUTPUT
2 A-INPUT
3 A+INPUT
4 V-
5 B+INPUT
6 B-INPUT
7 B OUTPUT
8 V+

4.18 NJU7241F25-X (IC651) : Regulator

- Pin layout

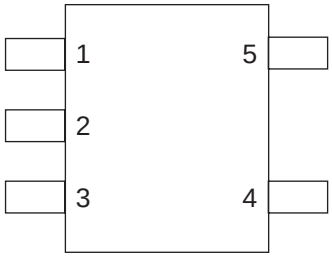


- Block diagram



4.19 NJU7241F33-X (IC504, IC804) : Voltage regulator

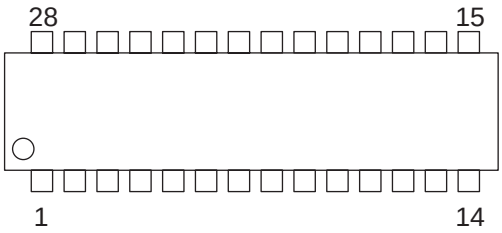
- Pin layout



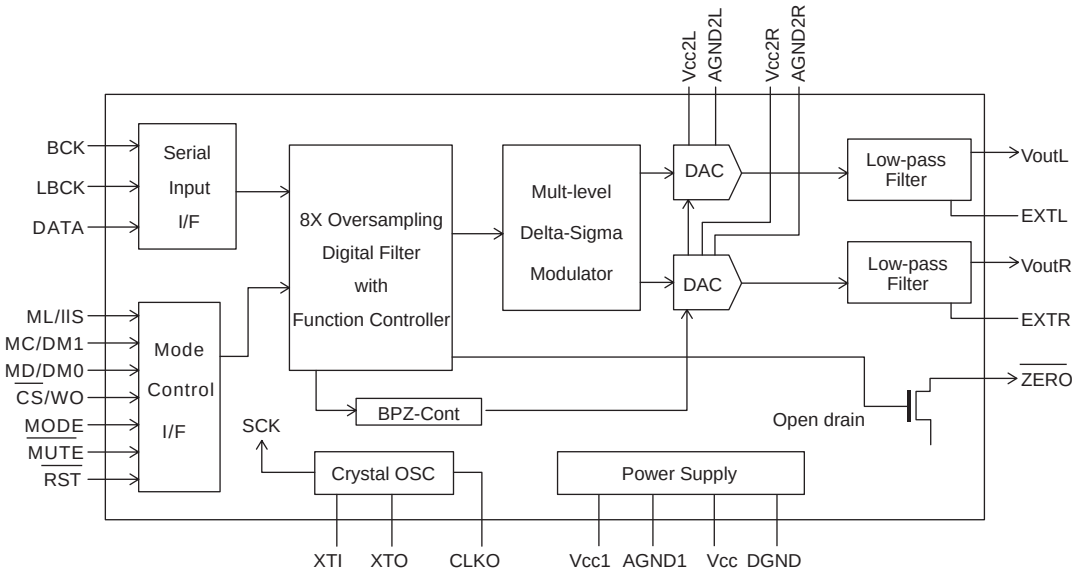
PIN FUNCTION
1. GND
2. V_{IN}
3. V_{OUT}
4. +NC
5. STB

4.20 PCM1716E-X (IC571) : D/A converter

- Pin layout



- Block diagram



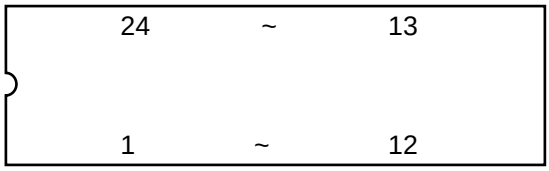
- Pin function

Pin No.	Symbol	I/O	Function
1	LRCK	I	LRCK clock input
2	DATA	I	Serial audio data input
3	BCK	I	Bit clock input for serial audio data
4	CLKO	O	Buffered output of system clock
5	XTI	I	Oscillator input / External clock input
6	XTO	O	Oscillator output
7	DGND	-	Digital ground
8	VDD	-	Digital power +5V
9	VDD2R	-	Analog power +5V
10	AGND2R	-	Analog ground
11	EXTR	O	Rch common pin of analog output amp
12	NC	-	Non connection
13	VOUTR	O	Rch analog voltage output of audio signal
14	AGND1	-	Analog ground
15	Vcc1	-	Analog power +5V

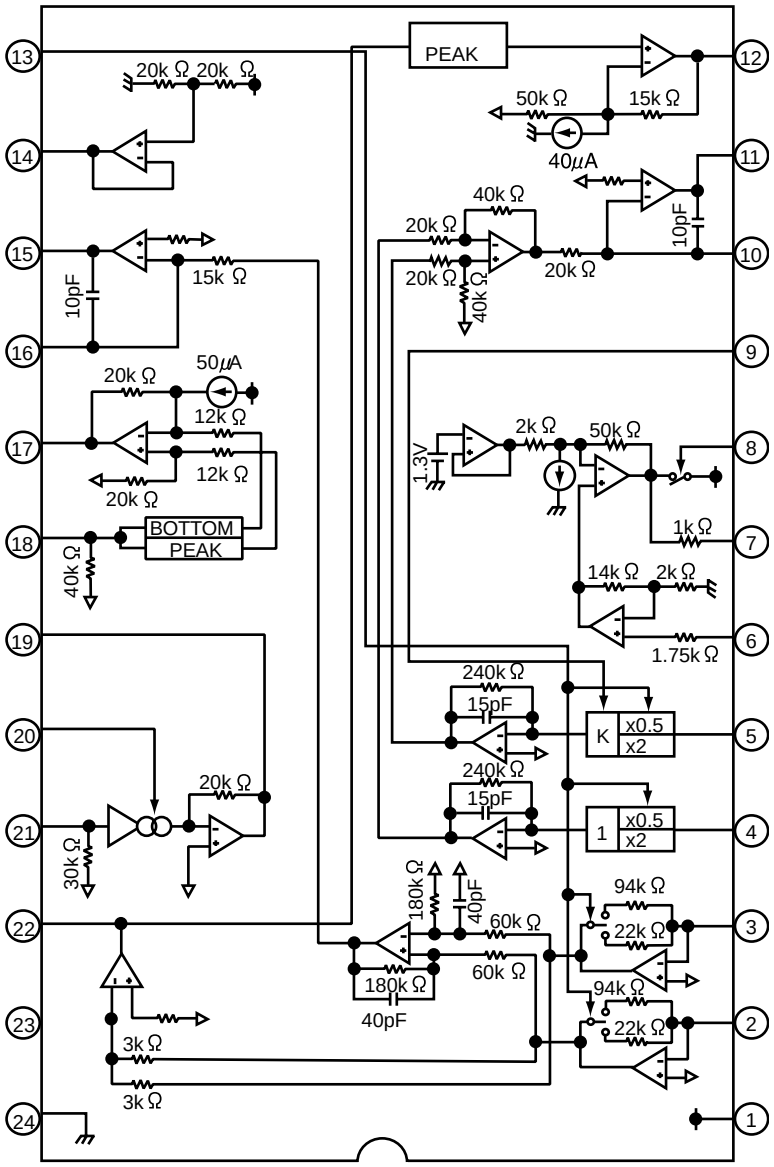
Pin No.	Symbol	I/O	Function
16	VOUTL	O	Lch analog voltage output of audio signal
17	NC	-	Non connection
18	EXTL	O	Lch common pin of analog output amp
19	AGND2L	-	Analog ground
20	Vcc2L	-	Analog power +5V
21	ZERO	O	Zero data flag
22	RST	I	Reset
23	CS/IWO	I	Chip select / Input format selection
24	MODE	I	Mode control select
25	MUTE	I	Mute control
26	MD/DM0	I	Mode control, Data / De-emphasis selection 1
27	MC/DM1	I	Mode control, BCK / De-emphasis selection 2
28	ML/IIS	I	Mode control, WDCK / Input format selection

4.21 TA2157FN-X (IC601) : RF amp

- Pin layout



- Block diagram



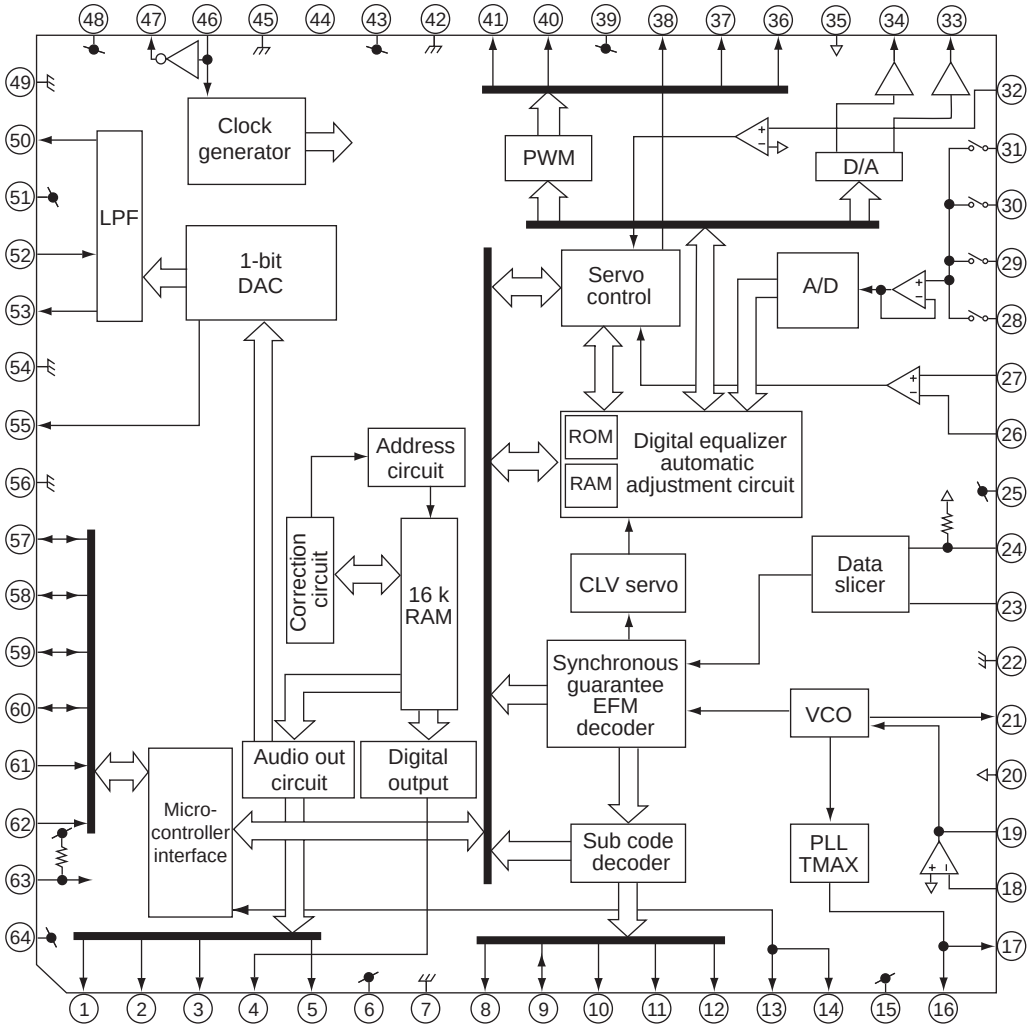
PIN / VCTRLPIN	SEL (APC SW)	TEB (TE BAL)	RFGC (AGC Gian)	TEB (TE BAL)
VCC	APC ON	-50%	+12dB	Normal mode (0dB)
HiZ	APC ON	0%	+6dB	Normal mode (0dB)
GND	APC OFF (LDO=H)	50%	0dB	CD-RW mode (+12dB)

• Pin function

<table>
<tr><th>Pin No.</th><th>Symbol</th><th>I/O</th><th>Function</th></tr>
<tr><td>1</td><td>VCC</td><td>-</td><td>3.3V power supply pin</td></tr>
<tr><td>2</td><td>FNI</td><td>I</td><td>Main-beam amp input pin</td></tr>
<tr><td>3</td><td>FPI</td><td>I</td><td>Main-beam amp input pin</td></tr>
<tr><td>4</td><td>TPI</td><td>I</td><td>Sub-beam amp input pin</td></tr>
<tr><td>5</td><td>TNI</td><td>I</td><td>Sub-beam amp input pin</td></tr>
<tr><td>6</td><td>MDI</td><td>I</td><td>Monitor photo diode amp input pin</td></tr>
<tr><td>7</td><td>LDO</td><td>O</td><td>Laser diode amp output pin</td></tr>
<tr><td>8</td><td>SEL</td><td>I</td><td>APC circuit ON/OFF control signal, laser diode (LDO) control signal input
or bottom/peak detection frequency change pin.
<table>
<tr><th>SEL</th><th>APC circuit</th><th>LDO</th></tr>
<tr><td>GND</td><td>OFF</td><td>Connected VCC through 1kΩ resistor</td></tr>
<tr><td>Hiz</td><td>ON</td><td>Control signal output</td></tr>
<tr><td>VCC</td><td>ON</td><td>Control signal output</td></tr>
</table></td></tr>
<tr><td>9</td><td>TEB</td><td>I</td><td>Tracking error balance adjustment signal input pin
Adjusts TE signal balance by eliminating carrier component from PWM signal (3-state output,
PWM carrier = 88.2kHz) output from TC94A14F/FA
TEBC pin using RC-LPF and inputting DC.
TEBC input voltage:GND~VCC</td></tr>
<tr><td>10</td><td>TEN</td><td>I</td><td>Tracking error signal generation amp negative-phase input pin</td></tr>
<tr><td>11</td><td>TEO</td><td>O</td><td>Tracking error signal generation amp output pin.
Combining TEO signal RFRP signal with TC94A14F/FA configures tracking search system.</td></tr>
<tr><td>12</td><td>RFDC</td><td>O</td><td>RF signal peak detection output pin</td></tr>
<tr><td>13</td><td>GVSW</td><td>I</td><td>AGC/FE/TE amp gain change pin
<table>
<tr><td>GVSW</td><td>Mode</td></tr>
<tr><td>GND</td><td>CD-RW</td></tr>
<tr><td>Hiz</td><td rowspan="2">Normal</td></tr>
<tr><td>VCC</td></tr>
</table></td></tr>
<tr><td>14</td><td>VRO</td><td>O</td><td>Reference voltage (VRO) output pin
*VRO=1/2VCC When VCC=3.3V</td></tr>
<tr><td>15</td><td>FEO</td><td>O</td><td>Focus error signal generation amp output pin</td></tr>
<tr><td>16</td><td>FEN</td><td>I</td><td>Focus error signal generation amp negative-phase input pin</td></tr>
<tr><td>17</td><td>RFRP</td><td>O</td><td>Signal amp output pin for track count
Combining RFRP signal and TEO signal with TC94A14F/FA configures tracking search system.</td></tr>
<tr><td>18
19
20</td><td>REIS
RFGO
RFGC</td><td>I
O
I</td><td>
RF signal amplitude adjustment amp output pin
RF amplitude adjustment control signal input pin
Adjusts RF signal amplitude by eliminating carrier component from PWM signal (3-state output, PWM carrier=88.2kHz)output fromTC94A14F/14FA *RFGC pin using RC-LPF and inputting DC.
*RFGC input voltage:GND~VCC</td></tr>
<tr><td>21</td><td>AGCIN</td><td>I</td><td>RF signal amplitude adjustment amp input pin</td></tr>
<tr><td>22</td><td>RFO</td><td>O</td><td>RF signal generation amp output pin</td></tr>
<tr><td>23</td><td>RFI</td><td>I</td><td>RF signal generation amp input pin</td></tr>
<tr><td>24</td><td>GND</td><td>-</td><td>GND pin</td></tr>
</table>

4.22 TC94A14FA (IC621) : DSP & DAC

- Pin layout & Block daiagram



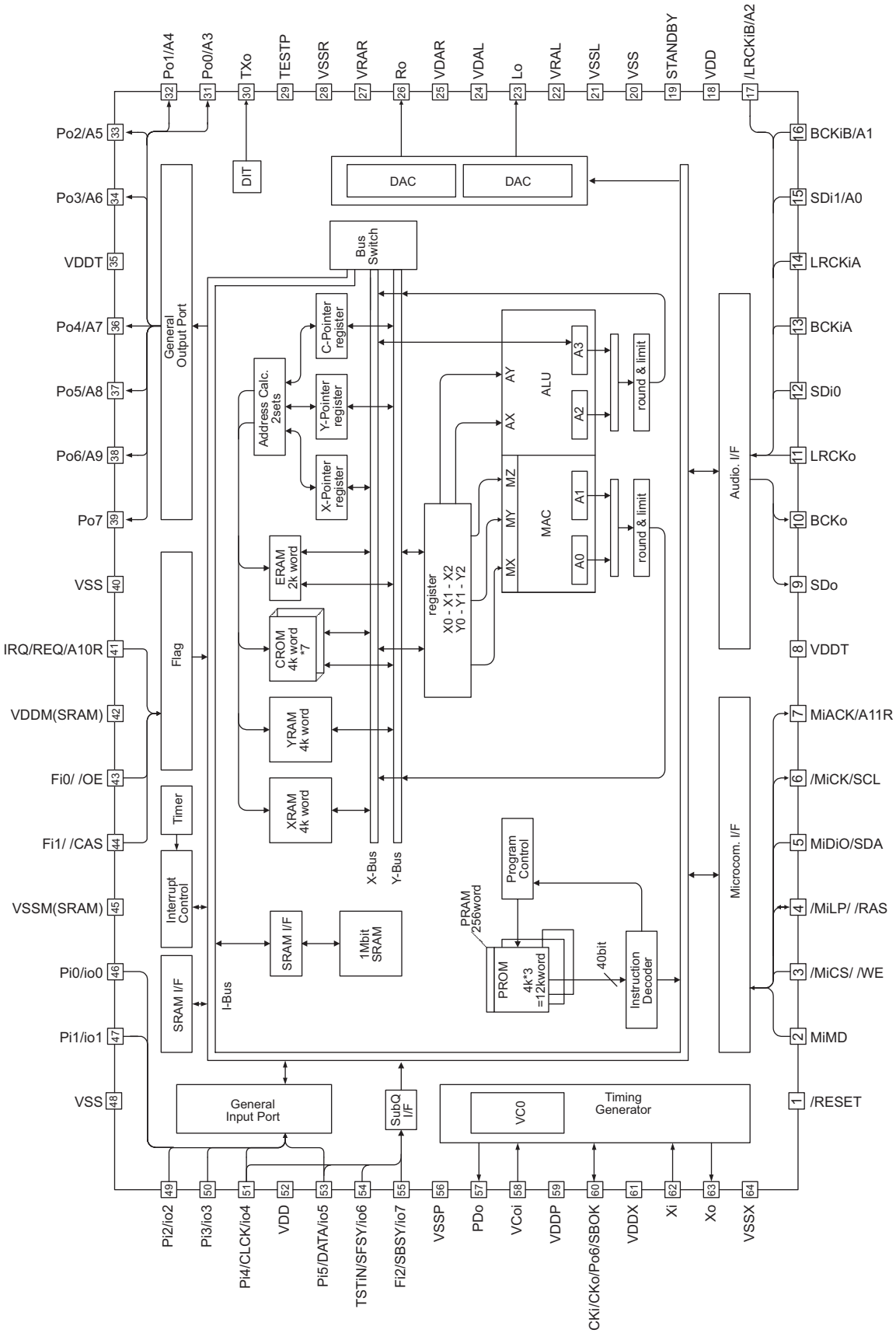
- Pin function

Pin No	Symbol	I/O	Descroption
1	BCK	O	Bit clock output pin.32fs, 48fs, or 64fs selectable by command.
2	LRCK	O	L/R channel clock output pin."L" for L channel and "H" for R channel. Output polarity can be inverted by command.
3	AOUT	O	Audio data output pin. MSB-first or LSB-first selectable by command.
4	DOUT	O	Digital data output pin.Outputs up to double-speed playback.
5	IPF	O	Correction flag output pin. When set to "H", AOUT output cannot be corrected by C2 correction processing.
6	V_{DD3}	-	Digital 3.3V power supply voltage pin.
7	V_{SS3}	-	Digital GND pin.
8	SBOK	O	Subcode Q data CRCC result output pin. "H" level when result is OK.
9	CLCK	O	Subcode P-W data read I/O pin. I/O polarity selectable by command.
10	DATA	O	Subcode P-W data output pin.
11	SFSY	O	Playback frame sync signal output pin.
12	SBSY	O	Subcode block sync signal output pin. "H" level at S1 when subcode sync is detected.
13	HSO	I/O	General-purpose input / output pins.Input port at reset.
14	UHSO		
15	PV_{DD3}	-	PLL-only 3.3V power supply voltage pin.
16	PDO	O	EFM and PLCK phase difference signal output pin.

Pin No	Symbol	I/O	Descroption
17	TMAX	O	TMAX detection result output pin. TMAX Detection Result / TMAX Output: Longer than fixed period / "PV_{DD3}" Within fixed period / "HiZ" Shorter than fixed period / "AV_{SS3}"
18	LPFN	I	Inverted input pin for PLL LPF amp.
19	LPFO	O	Output pin for PLL LPF amp.
20	PVREF	-	PLL-only VREF pin.
21	VCOF	O	VCO filter pin.
22	AV_{SS3}	-	Analog GND pin.
23	SLCO	O	DAC output pin for data slice level generation.
24	RFI	I	RF signal input pin. Zin selectable by command.
25	AV_{DD3}	-	Analog 3.3V power supply voltage pin.
26	RFCT	I	RFRP signal center level input pin.
27	RFZI	I	RFRP signal zero-cross input pin.
28	RFRP	I	RF ripple signal input pin.
29	FEI	I	Focus error signal input pin.
30	SBAD	I	Sub-beam adder signal input pin.
31	TEI	I	Tracking error input pin. Inputs when tracking servo is on.
32	TEZI	I	Tracking error signal zero-cross input pin.
33	FOO	O	Focus equalizer output pin.
34	TRO	O	Tracking equalizer output pin.
35	VREF	-	Analog reference power supply voltage pin.
36	RFGC	O	RF amplitude adjustment control signal output pin.
37	TEBC	O	Tracking balance control signal output pin.
38	SEL	O	APC circuit ON/OFF signal output pin. At laser on, high impedance with UHS="L", H output with UHS="H".
39	AV_{DD3}	-	Analog 3.3V power supply voltage pin.
40	FMO	O	Feed equalizer output pin.
41	DMO	O	Disc equalizer output pin.
42	V_{SS3}	-	Digital GND pin.
43	V_{DD3}	-	Digital 3.3V power supply voltage pin.
44	TESIN	I	Test input pin. Normally, fixed to "L".
45	XV_{SS3}	-	System clock oscillator GND pin.
46	XI	I	System clock oscillator input pin.
47	XO	O	System clock oscillator output pin.
48	XV_{DD3}	-	System clock oscillator 3.3V power supply voltage pin.
49	$DV_{SS3}R$	-	DA converter GND pin.
50	RO	O	R-channel data forward output pin.
51	DV_{DD3}	-	DA converter 3.3V power supply pin.
52	DVR	-	Reference voltage pin.
53	LO	O	L-channel data forward output pin.
54	$DV_{SS3}L$	-	DA converter GND pin.
55	ZDET	O	1 bit DA converter zero detection flag output pin.
56	V_{SS5}	-	Microcontroller interface GND pin.
57	BUS0		
58	BUS1	I/O	Microcontroller interface data I/O pins.
59	BUS2		
60	BUS3		
61	BUCK	I	Microcontroller interface clock input pin.
62	/CCE	I	Microcontroller interface chip enable signal input pin.At "L", BUS0 to BUS3 are active.
63	/RST	I	Reset signal input pin. At reset, "L".
64	V_{DD5}	-	Microcontroller interface 5V power supply pin.

4.23 TC94A20F-008 (IC652) : Audio digital processor with DAC and SRAM

- Pin layout & Block diagram



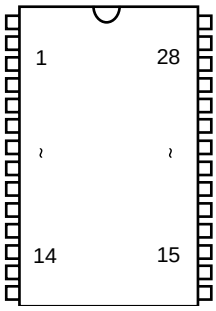
• Pin function

Pin No.	Symbol	I/O	Function
1	/RESET	I	Hard reset input (H:Operation L: Reset)
2	MiMD	I	Mode select input for MCU interface (H:IIC L:Serial)
3	/MiCS	I	Chip select input for MCU interface
	/WE	O	Write-enable for external DRAM
4	/MiLP	I	Latch pulse input for MCU interface
	/RAS	O	Low address strobe for external DRAM
5	MiDio	I/O	Data input and output for MCU interface (IIC:SDA)
6	/MiCK	I	Clock input for MCU interface (IIC:SCL)
7	MiACK	O	Acknowledge output for MCU interface
	A11R	O	Address output-11 for external DRAM
8	VDDT	-	Power supply for digital circuit (3.3V)
9	SDo	O	Data output
10	BCKo	O	Bit clock output
11	LRCKo	O	LR clock output
12	SDi0	I	Data input-0
13	BCKiA	I	Bit clock input-A
14	LRCKiA	I	LR clock input-A
15	SDi1	I	Data input-1 (Address output-5 for external SRAM)
	A0	O	Address output-1 for external DRAM
16	BCKiB	I	Bit clock input-B
	A1	O	External DRAM address output-1
17	LRCKiB	I	LR clock input-B (Enable signal output for external SRAM)
	A2	O	Address-2 for external DRAM
18	VDD	-	Power supply for digital circuit (2.5V)
19	STANBY	I	Control input for stand-by mode (H:STB, L:Normal)
20	VSS	-	Ground for digital circuit
21	VSSL	-	Ground for DAC Lch
22	VRAL	-	Reference voltage for DAC Lch
23	LO	O	DAC Lch output
24	VDAL	-	Power supply for DAC Lch (2.5V)
25	VDAR	-	Power supply for DAC Rch (2.5V)
26	RO	O	DAC Rch output
27	VRAR	-	Reference voltage for DAC Rch
28	VSSR	-	Ground for DAC Rch
29	TESTP	I	Test terminal (H:Test mode L:Normal)
30	TXO	O	SPDIF output
31	Po0	O	General output port-0
	A3	O	Address-3 for external DRAM
32	Po1	O	General output port-1
	A4	O	Address-4 for external DRAM
33	Po2	O	General output port-2
	A5	O	Address-5 for external DRAM
34	Po3	O	General output port-3
	A6	O	Address-6 for external DRAM
35	VDDT	-	Power supply for digital circuit (3.3V)

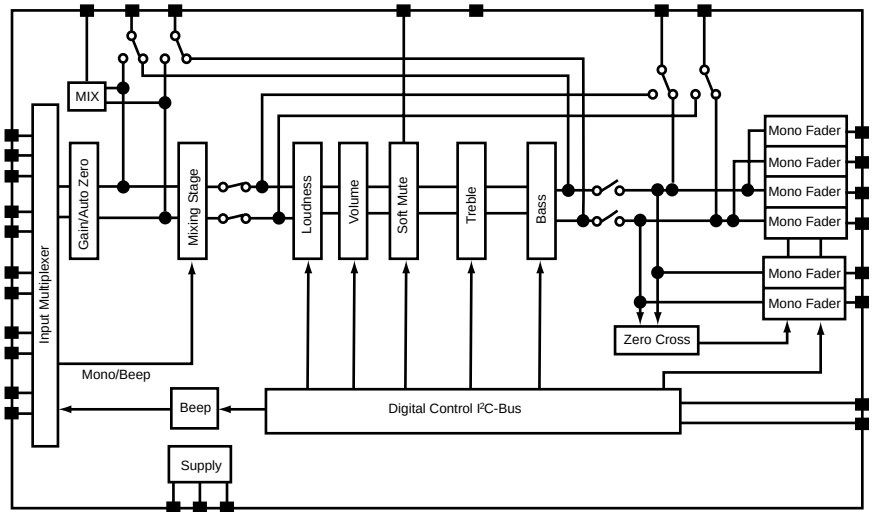
Pin No.	Symbol	I/O	Function
36	Po4	O	General output port-4
	A7	O	Address-7 for external DRAM
37	Po5	O	General output port-5 (Address output-7 for external SRAM)
	A8	O	Address-8 for external DRAM
38	Po6	O	General output port-6 (Address output-6 for external SRAM)
	A9	O	Address-9 for external DRAM
39	Po7	O	General output port-7
40	VSS	-	Ground for digital circuit
41	IRQ/REQ	I/O	Interruption input (BS I/F:REQ output)
	A11R	O	Address-11 for external DRAM
42	VDDM	-	Power supply for built-in 1Mbit SRAM (2.5V)
43	Fi0	I	Flag input-0
	/OE	O	Enable output for external up DRAM
44	Fi1	I	Flag input-1
	/CAS	O	Column address strobe for external DRAM
45	VSSM	-	Ground for built-in 1Mbit SRAM
46	Pi0	I	General input-0
	io0	I/O	Data I/O-0 for external DRAM
47	Pi1	I	General input-1
	io1	I/O	Data I/O-1 for external DRAM
48	VSS	-	Digital ground
49	Pi2	I	General input-2
	io2	I/O	Data I/O-2 for external DRAM
50	Pi3	I	General input-3
	io3	I/O	Data I/O-3 for external DRAM
51	Pi4	I	General input-4
	io4/CLCK	I/O	Data I/O-4 for external DRAM
52	VDD	-	Power supply for digital circuit (2.5V)
53	Pi5	I	General input-5
	io5/DATA	I/O	Data I/O-5 for external DRAM / SUBQ I/F data input
54	TSTiN	I	Test terminal (H or L fixed)
	io6/SFSY	I/O	Data I/O-6 for external DRAM / SUBQ I/F frame sync input
55	Fi2	I	Flag input-2
	io7/SBSY	I/O	Data I/O-7 for external DRAM / SUBQ I/F block sync input
56	VSSP	-	Ground for VCO circuit
57	Pdo	O	PLL phase detector signal output
58	Vcoi	I	VCO control voltage input
59	VDDP	-	Power supply for VCO circuit (2.5V)
60	CKi/CKo/Po6	I/O	External system clock input/clock output/general output-6
	CKo/Po6/SBOK	I/O	Clock output/general output-6/SUBQ I/F SBOK input
61	VDDX	-	Power supply for crystal oscillator (2.5V)
62	Xi	I	Crystal oscillator input
63	Xo	O	Crystal oscillator output
64	VSSX	-	Ground for crystal oscillator

4.24 TDA7404D-X (IC911) : Car radio signal processor

- Pin layout

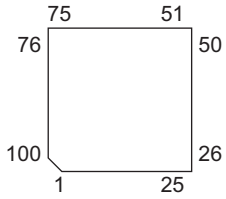


- Block diagram



4.25 TMP91CW12AF4NB1 (IC501) : CPU

- Pin layout



- Pin function

Pin No	Symbol	I/O	Function
1	VREFL	I	Reference power supply input for AD converter (L)
2	AVSS	-	Ground for AD converter (0V)
3	AVCC	-	Power supply fro AD converter
4	P70	I/O	Input/output port
	TA0IN	I	8-bit timer 0 input
5	P71	I/O	Input/output port
	TA1OUT	O	8-bit timer 1 output
6	P72	I/O	Input/output port
	TA3OUT	O	8-bit timer 3 output
7	P73	I/O	Input/output port
	TA4IN	I	8-bit timer 4 input
8	P74	I/O	Input/output port
	TA5OUT	O	8-bit timer 5 output
9	P75	I/O	Input/output port
	TA7OUT	O	8-bit timer 7 output
10	P80	I/O	Input/output port
	TB0IN0	I	16-bit timer 0 input 0
	INT5	I	Interrupt request 5
11	P81	I/O	Input/output port
	TB0IN1	I	16-bit timer 0 input 1
	INT6	I	Interrupt request 6
12	P82	I/O	Input/output port
	TB0OUT0	O	16-bit timer 0 output 0
13	P83	I/O	Input/output port
	TB0OUT1	O	16-bit timer 0 output 1
14	P84	I/O	16-bit timer 1 input 0
	TB1IN0	I	Interrupt request 7
	INT7	I	Input/output port
15	P85	I/O	16-bit timer 1 input 1
	TB1IN1	I	Interrupt request 8
	INT8	I	Input/output port
16	P86	I/O	16-bit timer 1 output 0
	TB1OUT0	O	Input/output port
17	P87	I/O	16-bit timer 1 output 1
	TB1OUT1	O	Input/output port
18	P90	I/O	Serial transmitting data 0
	TXD0	O	Input/output port
19	P91	I/O	Serial receiving data0
	RXD0	I	Input/output port
20	P92	I/O	Serial clock input/output 0
	SCLK0	I/O	Serial data transmitting possibility 0 (Clear to Send)
	$\overline{\text{CTS0}}$	I	Input/output port
21	P93	I/O	Serial transmitting data 1
	TXD1	O	Input/output port

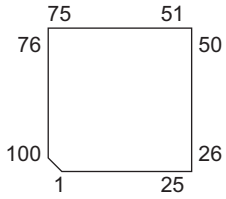
Pin No	Symbol	I/O	Function
22	P94	I/O	Serial receiving data 1
	RX1	I	Serial receiving data 1
23	P95	I/O	Input/output port
	SCLK1	I/O	Serial clock input/output 1
	$\overline{\text{CTS1}}$	I	Serial data transmitting possibility 1 (Clear to Send)
24	AM0	I	Action mode 0
25	DVCC	-	Power supply
26	X2	-	Crystal oscillator connecting terminal
27	DVSS	-	Ground
28	X1	-	Crystal oscillator connecting terminal
29	AM1	I	Action mode 1
30	$\overline{\text{RESET}}$	I	Reset input
31	P96	I/O	Input/output port
	XT1	I	Low frequency generator connecting terminal
32	P97	I/O	Input/output port
	XT2	I	Low frequency generator connecting terminal
33	EMU0	O	Open
34	EMU1	O	Open
35	PA0	I/O	Input/output port
	INT1	I	Interrupt request 1
36	PA1	I/O	Input/output port
	INT2	I	Interrupt request 2
37	PA2	I/O	Input/output port
	INT3	I	Interrupt request 3
38	PA3	I/O	Input/output port
	INT4	I	Interrupt request 4
39	PA4	I/O	Input/output port
40	PA5	I/O	Input/output port
41	PA6	I/O	Input/output port
42	PA7	I/O	Input/output port
43	ALE	O	Address latch enable
44	P00	I/O	Input/output port
	AD0	I/O	Address data bus 0
45	P01	I/O	Input/output port
	AD1	I/O	Address data bus 1
46	P02	I/O	Input/output port
	AD2	I/O	Address data bus 2
47	P03	I/O	Input/output port
	AD3	I/O	Address data bus 3
48	P04	I/O	Input/output port
	AD4	I/O	Address data bus 4
49	P05	I/O	Input/output port
	AD5	I/O	Address data bus 5
50	P06	I/O	Input/output port
	AD6	I/O	Address data bus 6
51	P07	I/O	Input/output port
	AD7	I/O	Address data bus 7
52	P10	I/O	Input/output port
	AD8	I/O	Address data bus 8
	A8	O	Address bus 8
53	P11	I/O	Input/output port
	AD9	I/O	Address data bus 9
	A9	O	Address bus 9
54	P12	I/O	Input/output port
	AD10	I/O	Address data bus 10
	A10	O	Address bus 10

Pin No	Symbol	I/O	Function
55	P13	I/O	Input/output port
	AD11	I/O	Address data bus 11
	A11	O	Address bus 11
56	P14	I/O	Input/output port
	AD12	I/O	Address data bus 12
	A12	O	Address bus 12
57	P15	I/O	Input/output port
	AD3	I/O	Address data bus 3
	A13	O	Address bus 13
58	P16	I/O	Input/output port
	AD14	I/O	Address data bus 14
	A14	O	Address bus 14
59	P17	I/O	Input/output port
	AD15	I/O	Address data bus 15
	A15	O	Address bus 15
60	P20	I/O	Input/output port
	A0	O	Address bus 0
	A16	O	Address bus 16
61	P21	I/O	Input/output port
	A1	O	Address bus 1
	A17	O	Address bus 17
62	DVSS	-	Ground
63	$\overline{\text{NMI}}$	I	Non mascable interrupt equest
64	DVCC	-	Power supply
65	P22	I/O	Input/output port
	A2	O	Address bus 2
	A18	O	Address bus 18
66	P23	I/O	Input/output port
	A3	O	Address bus 3
	A19	O	Address bus 19
67	P24	I/O	Input/output port
	A4	O	Address bus 4
	A20	O	Address bus 20
68	P25	I/O	Input/output port
	A5	O	Address bus 5
	A21	O	Address bus 21
69	P26	I/O	Input/output port
	A6	O	Address bus 6
	A22	O	Address bus 22
70	P27	I/O	Input/output port
	A7	O	Address bus 7
	A23	O	Address bus 23
71	P30	O	Output port
	$\overline{\text{RD}}$	O	Read output for external memory
72	P31	O	Output port
	$\overline{\text{WR}}$	O	Write strobe signal for AD0 to AD7 data
73	P32	I/O	Input/output port (with pull up)
	$\overline{\text{HWR}}$	O	Write strobe signal for AD8 to AD15 data
74	P33	I/O	Input/output port (with pull up)
	$\overline{\text{WAIT}}$	I	Bus wait request to CPU
75	P34	I/O	Input/output port (with pull up)
	$\overline{\text{BUSRQ}}$	I	Bus request
76	P35	I/O	Input/output port (with pull up)
	$\overline{\text{BUSAK}}$	O	Bus acknowledge
77	P36	I/O	Input/output port (with pull up)
	R/W	O	Read/Write

Pin No	Symbol	I/O	Function
78	P37	I/O	Input/output port (with pull up)
79	P40	I/O	Input/output port (with pull up)
	$\overline{CS0}$	O	Chip select 0
80	P41	I/O	Input/output port (with pull up)
	$\overline{CS1}$	O	Chip select 1
81	P42	I/O	Input/output port (with pull up)
	$\overline{CS2}$	O	Chip select 2
82	P43	I/O	Input/output port (with pull up)
	$\overline{CS3}$	O	Chip select 3
83	P60	I/O	Input/output port
	SCK	I/O	Clock input/output (SIO mode of serial bus interface)
84	P61	I/O	Input/output port
	SO	O	Data transmitting terminal (SIO mode of serial bus interface) Data transmit/receive terminal (I2C mode of serial bus interface)
	SDA	I/O	Open drain output terminal
85	P62	I/O	Input/output port
	SI	I	Data receiving terminal (SIO mode of serial bus interface) Clock input/output terminal (I2C mode of serial bus interface)
	SCL	I/O	Open drain output terminal
86	P63	I/O	Input/output port
	INT0	I	Interrupt request 0
87	P64	I/O	Input/output port
	SCOUT	O	System clock output
88	P65	I/O	Input/output port
89	DVCC	-	Power supply
90	P66	I/O	Input/output port
91	DVSS	-	Ground
92	P50	I	Input port
	AN0	I	AD converter input
93	P51	I	Input port
	AN1	I	AD converter input
94	P52	I	Input port
	AN2	I	AD converter input
95	P53	I	Input port
	AN3	I	AD converter input
	$\overline{ADTRG}$	I	External start request for AD converter
96	P54	I	Input port
	AN4	I	AD converter input
97	P55	I	Input port
	AN5	I	AD converter input
98	P56	I	Input port
	AN6	I	AD converter input
99	P57	I	Input port
	AN7	I	AD converter input
100	VREFH	I	Reference power supply input for AD converter (H)

4.26 UPD784217AGC205 (IC701) : CPU

- Pin layout



- Pin function

Pin No.	Symbol	I/O	Function
1 to 7	NC	-	Not use
8	ANT CONT	-	Antenna remote control
9	VDD	-	Power supply
10	X2	-	
11	X1	-	
12	VSS	-	Ground
13	XT2	-	
14	XT1	-	
15	RESET	I	System reset
16	REMOCON	I	Remocon input
17	BUS-INT	I	J-BUS INT
18	PS2	I	Power save2, H means STOP mode
19	CD-REQ	I	CD REQ INPUT
20	RDS-SCK	I	Not use
21	STEERING REMOCON	I	Steering remocon input
22	KEY DATA	I	KEY DATA
23	AVDD	-	A/D converter power supply
24	AVREF0	-	A/D reference voltage
25	VOL1	I	Volume encoder pulse input 1
26	VOL2	I	Volume encoder pulse input 2
27 to 29	NC	-	Not use
30	MRC	I	MRC input
31	SQ	I	Not use, pull down
32	SM	I	S.METER input
33	AVSS	-	Ground
34	NC	-	Not use
35	STAGE3	I	Feature selection, pull up
36	AVREF	-	
37	BUS-SI	I	J-BUS data input
38	BUS-SO	O	J-BUS data output
39	BUS-SCK	I/O	J-BUS clock input/output
40	BUS-I/O	O	J-BUS I/O selection output:H input:L
41	DISP DA	O	DISPLAY DATA output
42	DISP SCK	O	DISPLAY SCK
43	DISP CE	O	DISPLAY CE
44	BUZZER	O	Buzzer output
45	E2PROM-DI	I	I2C data input

Pin No.	Symbol	I/O	Function
46	E2PROM-DO	O	I2C data output
47	E2PROM-CLK	O	I2C clock output
48	OPEN	I	DOOR OPEN SW
49	DETACH	I	Detach detect input; H means detaching
50	NC	-	Not use
51 to 53	NC	-	Not use
54	EQ-CLK	O	Clock output for e-EQ IC
55	EQ-DA	O	Data output for e-EQ IC
56	EQ-LA	O	Latch output for e-EQ IC
57 to 59	NC	-	Not use
60	RDS DA	I	Not use
61	SD/ST	I	Station detector or stereo indicator input; H means a station is there, L means the program is stereo.
62	AFCK	O	Not use
63	SEEK/STOP	O	Auto seek and stop selecting output; H means seeking, L means receiving.
64	CF SEL	O	Wide & Narrow
65	FM/AM	O	FM, AM band selecting output; H=FM, L=AM
66	PLL-CE	O	CE output for PLL IC
67	PLL-DO	O	Data output for PLL IC
68	PLL-CLK	O	Clock output for PLL IC
69	PLL-DI	I	Data input from PLL IC
70	TEL-MUTING	I	Telephone muting detection input; Active level can be selected H or L in PSM
71	DIM-OUT	O	Dimmer detector output
72	VSS	-	Ground
73	DIM-IN	I	Dimmer detector input L=dimmer on
74	PS1	I	Power save1 L=ACC off
75	POWER	O	Power on/off control output H=power on
76	CD-ON	-	Not use
77	MUTING	O	Muting output L=muting on
78	CD MUTING	I	CD mute input L=mute on
79	CD RESET	O	CD reset control out H=reset on
80	LINE SEL	I	Feature selection H: line input (U57:not support), L: support
81	VDD	-	Power supply
82	NC	-	Not use
83	VOL-DA	O	Data output for e-vol IC
84	VOL-CLK	O	Clock output for e-vol IC
85	WOOFER SEL	I	Feature selection H:support L:Not support
86	SUB MUTING	O	Muting control output for subwoofer
87	LPF1	O	LPF control1
88	LPF2	O	LPF control2
89	STAGE2	I	Feature selection H: R or Do L: J or U
90	STAGE1	I	Feature selection H: R or U L: J or Do
91 to 93	NC	-	Not use
94	TEST		For rewriting flash memory
95 to 100	NC	-	Not use

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AV & MULTIMEDIA COMPANY MOBILE ENTERTAINMENT CATEGORY 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

(No.49838)

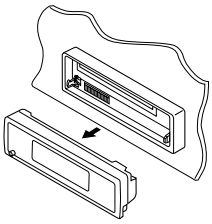
Printed in Japan
WPC

JVC

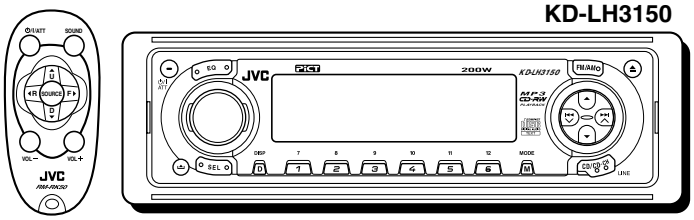
SCHEMATIC DIAGRAMS

CD RECEIVER

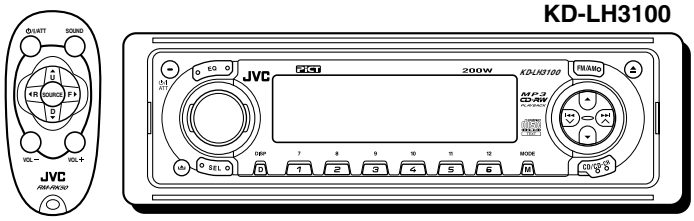
KD-LH3150,KD-LH3100



KD-LH3150



KD-LH3100



PICT

COMPACT disc DIGITAL AUDIO TEXT

MP3 CD-RW PLAYBACK

KD-LH3150
Area Suffix
J ---------- U.S.A.
C ---------- CANADA

	KD-LH3150J	KD-LH3150C	KD-LH3100J
ARSENAL rogo	○	×	×
LINE in	○	○	×
Line output level	4 V	4 V	2 V
WARRANTY	2 YEAR	1 YEAR	1 YEAR

KD-LH3100
Area Suffix
J ---------- U.S.A.

Contents

Block diagram ---------- 2-1
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Printed circuit boards ---------- 2-5,6

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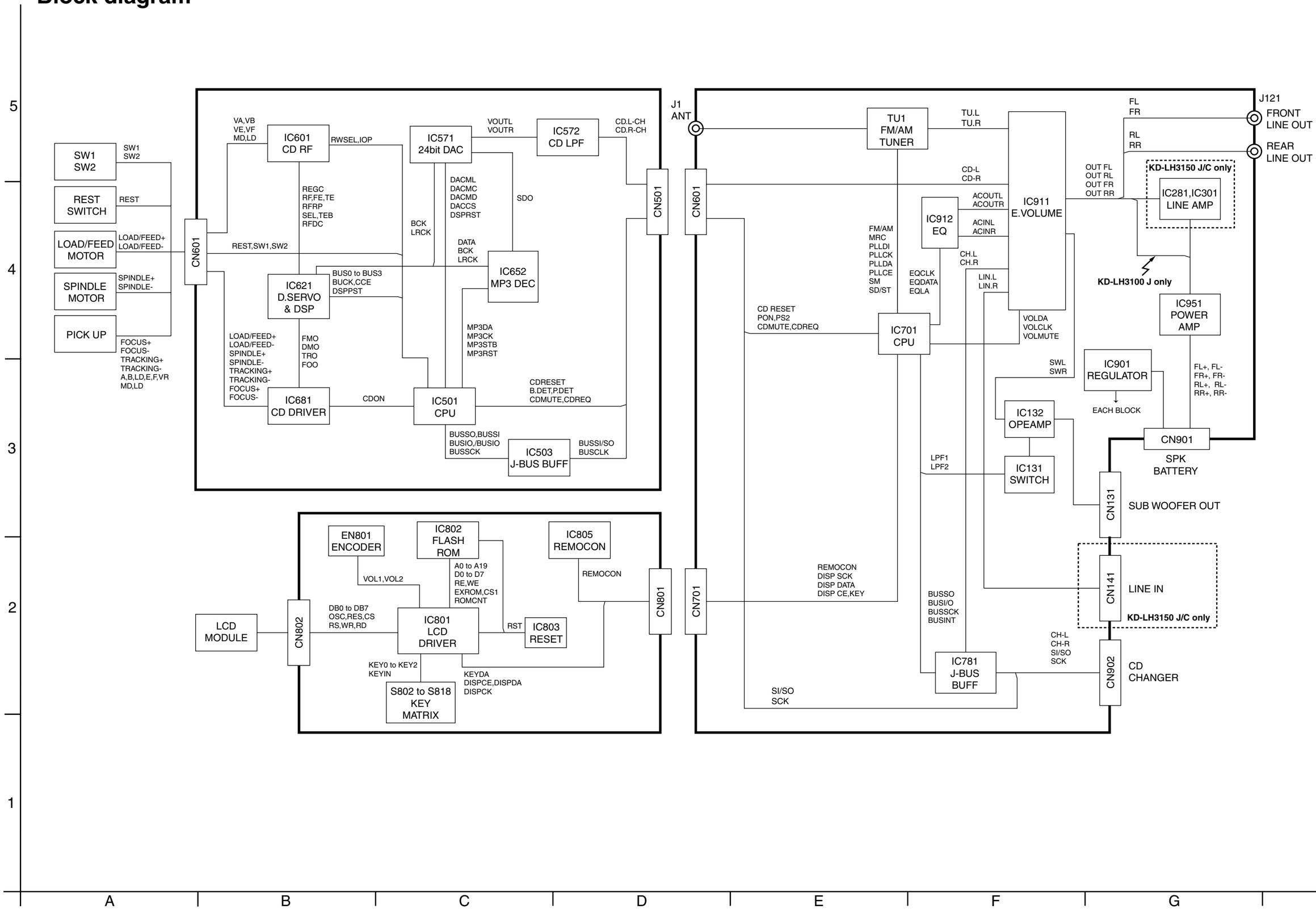
No.49838SCH
2003/05

Safety precaution

⚠ ***CAUTION*** **Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

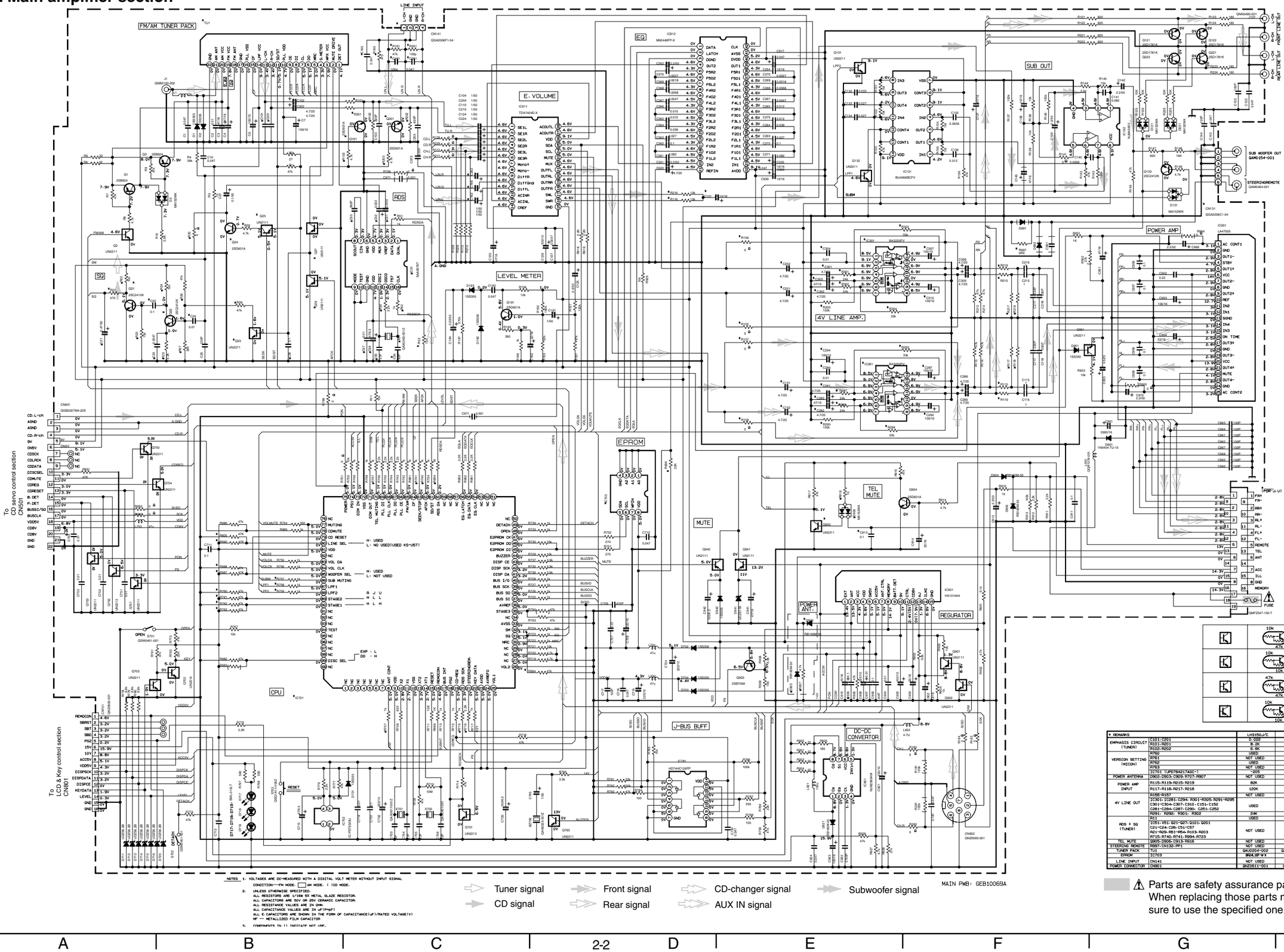
⚠ ***CAUTION*** **Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

Block diagram



Standard schematic diagrams

■ Main amplifier section



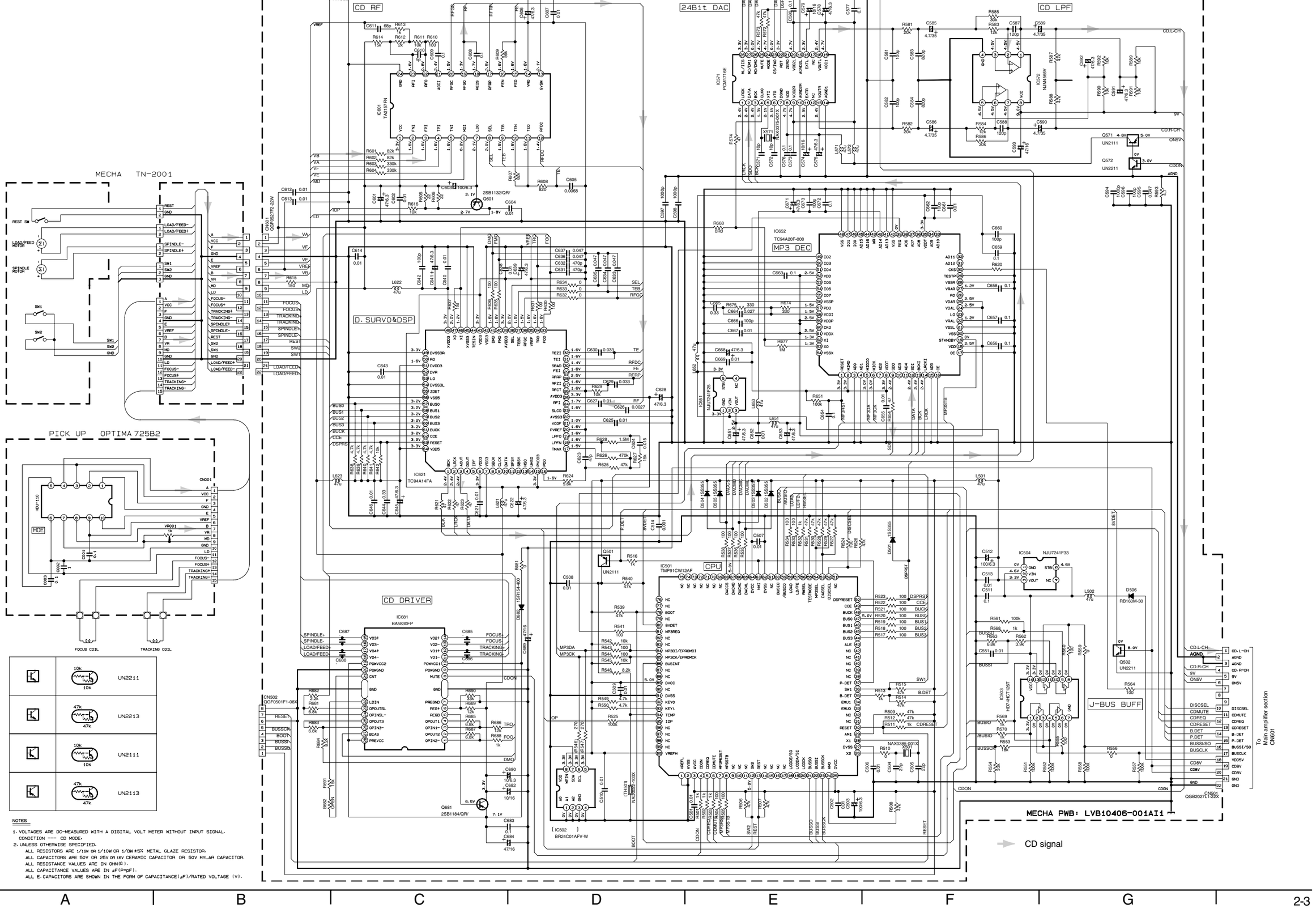
	10k / 47k	UN2214
	10k / 47k	UN2211
	47k / 47k	UN2213
	10k / 10k	UN2111

★ REMARKS		LH3150J/C	LH3100J	LH3105U
EMPHASIS CIRCUIT (TUNER)	C101-C201	0.022	0.022	0.012
	R101-R201	8.2K	8.2K	9.1K
	R102-R202	6.8K	6.8K	27K
VERSION SETTING (MICON)	R761	NOT USED	NOT USED	NOT USED
	R762	USED	USED	NOT USED
	R763	NOT USED	NOT USED	USED
	IC703 (UPD78421GC-)	-205	-205	-205
POWER ANTENNA	D902-D903-D909-R707-R907	NOT USED	NOT USED	USED
POWER AMP INPUT	R115-R119-R215-R219	82K	27K	82K
	R117-R118-R217-R218	120K	NOT USED	120K
4V LINE OUT	R155-R157	NOT USED	USED	NOT USED
	IC301-IC281-C294-R301-R305-R291-R295 C301-C304-C307-C310-C151-C152 C281-C284-C287-C290-C251-C252 R291-R292-R301-R302	USED	NOT USED	USED
RDS + SQ (TUNER)	R11	USED	USED	USED
	IC51-IC1-Q21-Q27-Q101-Q201 C21-C24-C26-C51-C57 R21-R25-R81-R84-R103-R203 R715-R740-R741-R994-R723	NOT USED	NOT USED	NOT USED
TEL MUTE	Q905-D906-C913-R916	NOT USED	NOT USED	USED
STEERING REMOTE	R997-CN132-P91	NOT USED	NOT USED	NOT USED
TUNER PACK	TU1	QAU0204-002	QAU0204-002	QAU0204-002
EPROM	IC703	BR24L08F-W★	BR24L08F-W★	BR24L08F-W★
LINE INPUT	CN141	NOT USED	USED	USED
POWER CONNECTOR	CN901	QNZ0611-001	QNZ0611-001	QNZ0611-001

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

NOTES 1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL
CONDITION——FM MODE- ☐ AM MODE- ( )CD MODE-
2. UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/16W 5% METAL GLAZE RESISTOR.
ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM.
ALL CAPACITANCE VALUES ARE IN uF(P=pF)
ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(uF)/RATED VOLTAGE(V)
MF — METALLIZED FILM CAPACITOR
3. COMPONENTS IN ( ) INDICATE NOT USE.

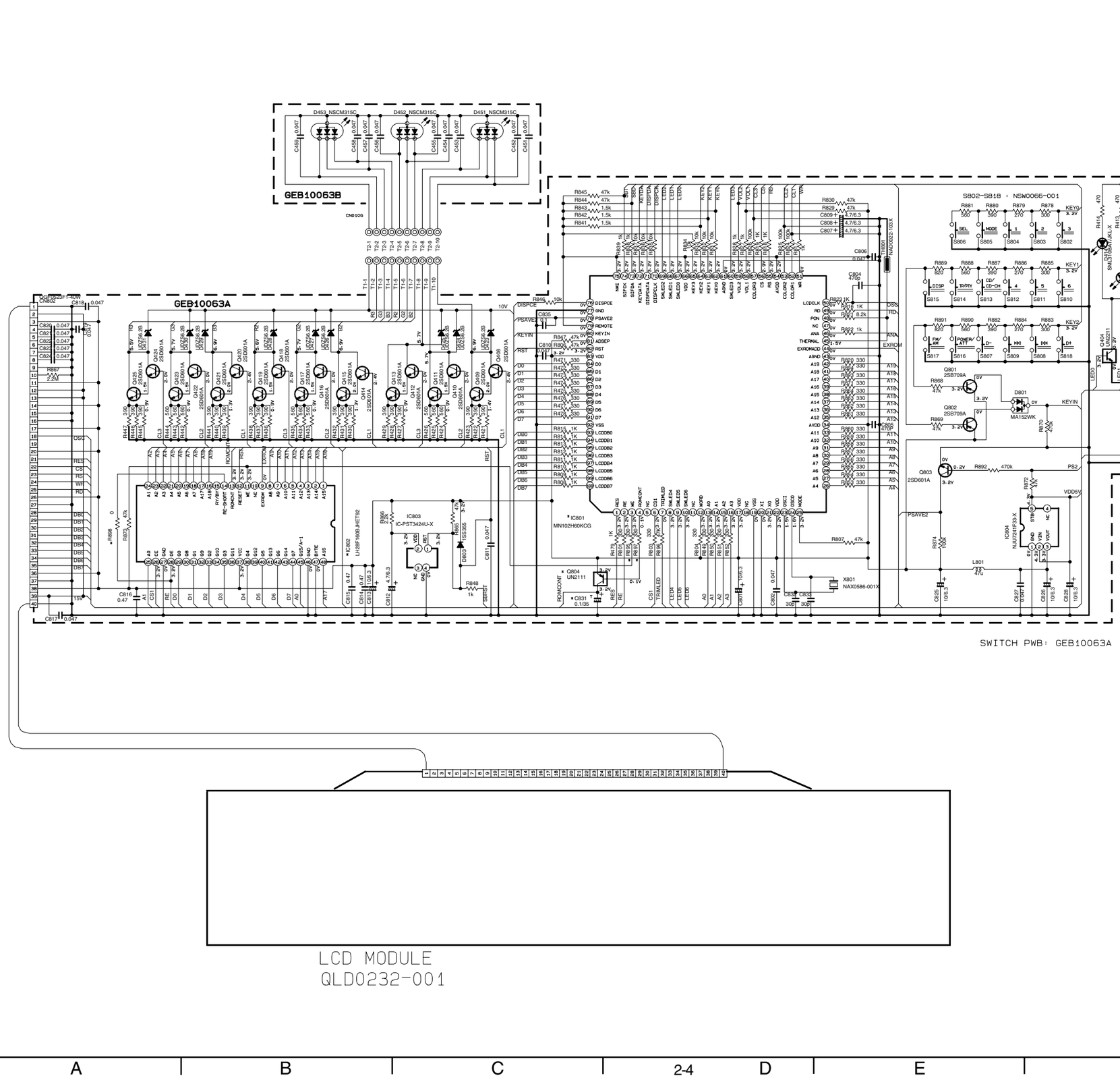
■ CD servo control section



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
   CONDITION ---- CD MODE.
2. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/16W OR 1/10W OR 1/8W ±5% METAL GLAZE RESISTOR.
   ALL CAPACITORS ARE 50V OR 25V OR 16V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE (V).

■ LCD & Key control section



	10k / 10k	UN2211
	47k / 47k	UN2213
	10k / 10k	UN2111

*REMARKS		KD-LH3150J/ LH3150C KD-LH3100J/ LH3105U SERIES
FLASH ROM	IC802	LH28F160BJHET92
	Q804	USED
	C831	USED
	R895	USED
	R897	USED
	R898	USED
MICON	IC801	MN102H60KCG

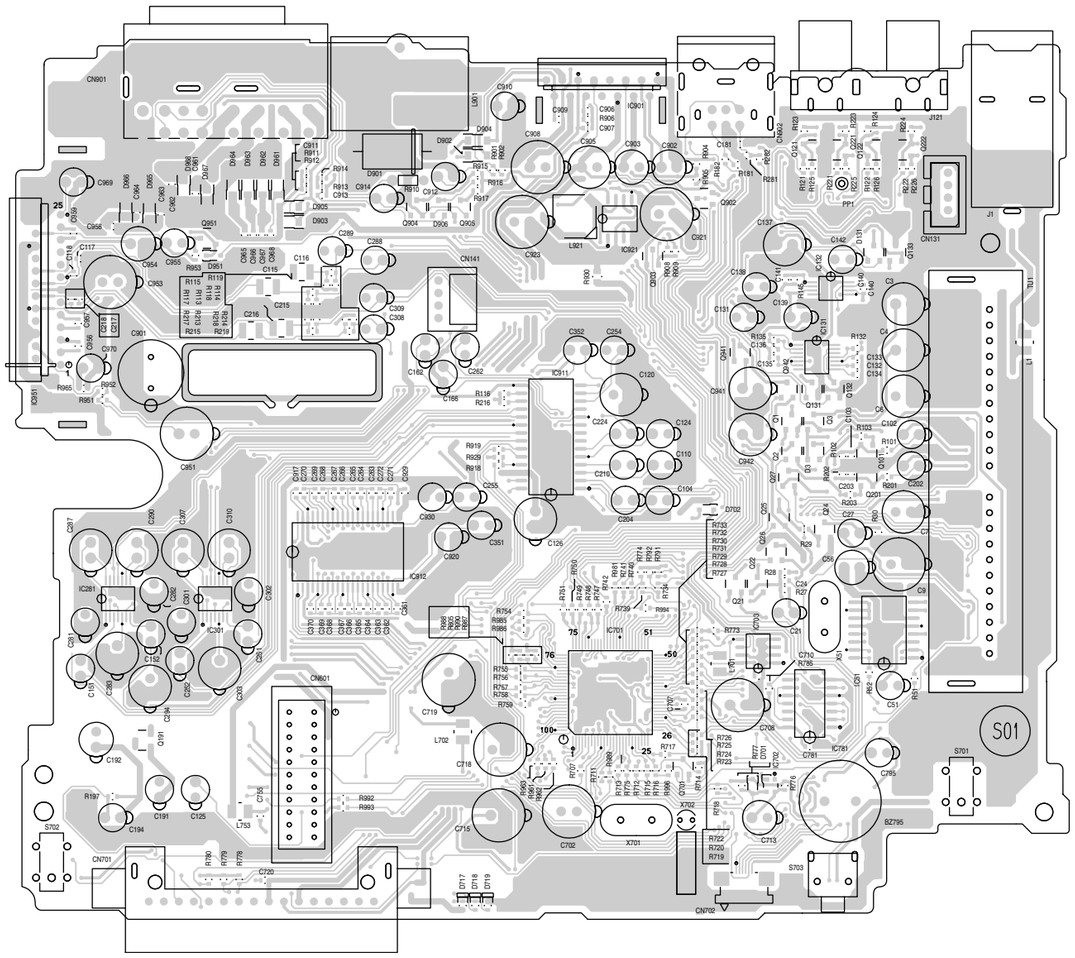
NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
   CONDITION --- CD MODE.
2. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/16W OR 1/10W OR 1/8W ±5% METAL GLAZE RESISTOR.
   ALL CAPACITORS ARE 50V OR 25V OR 16V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE (V).

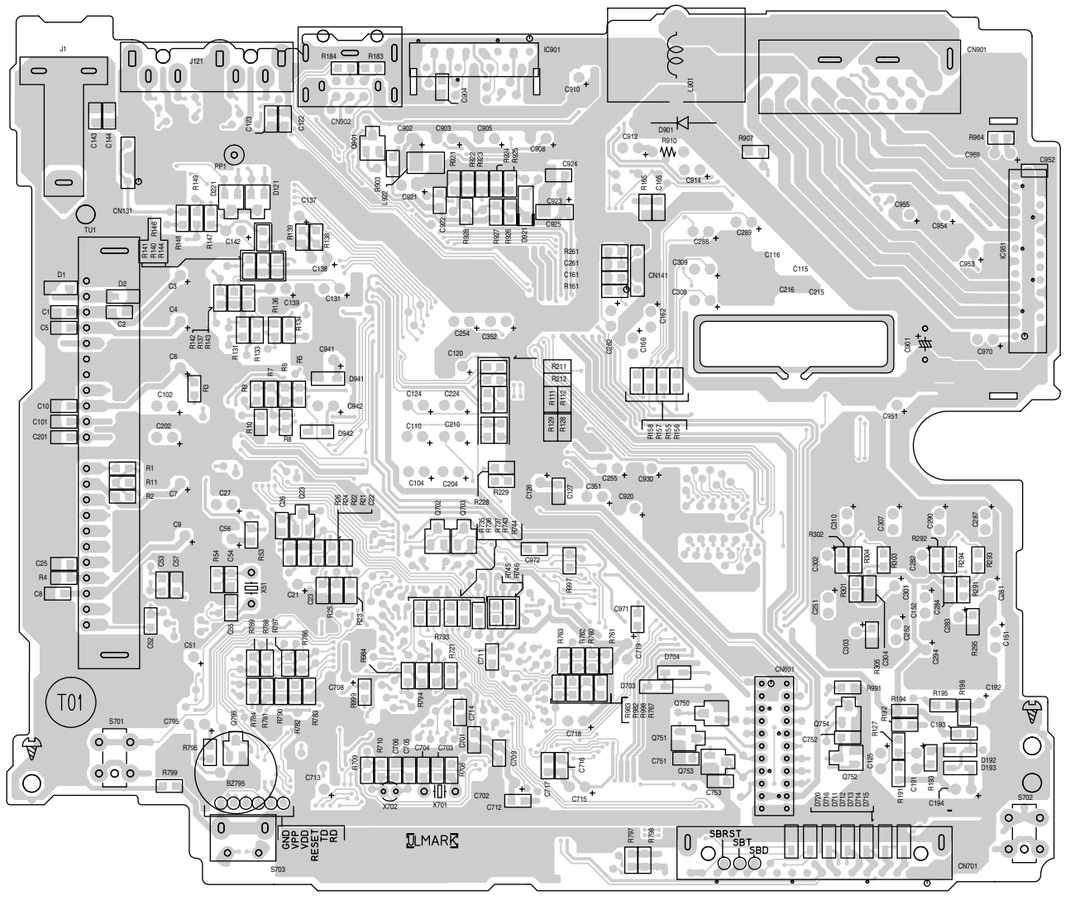
Printed circuit boards

■ Main board

Forward side



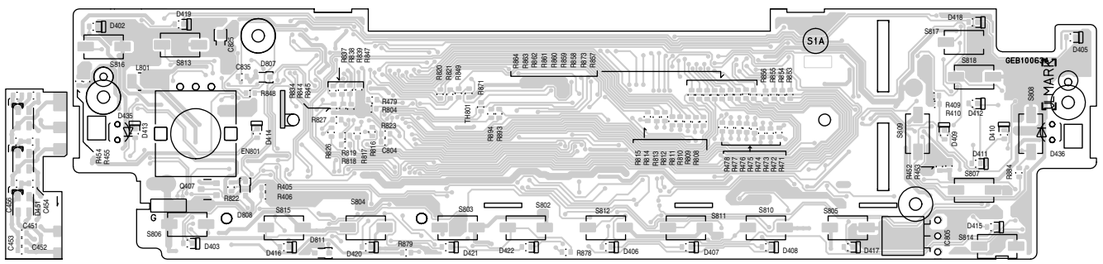
Reverse side



KD-LH3150,KD-LH3100

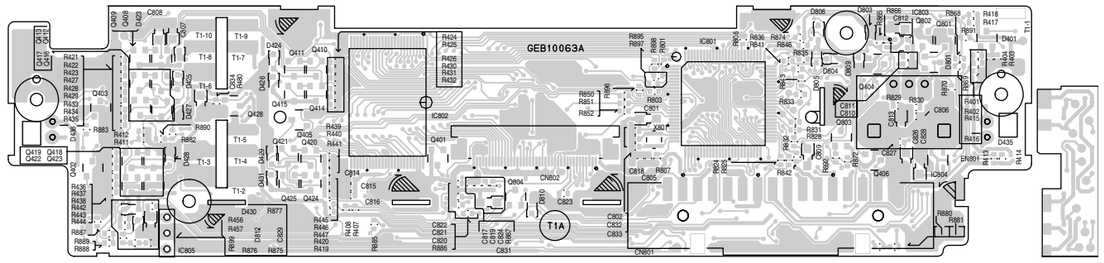
■ Front board

Forward side



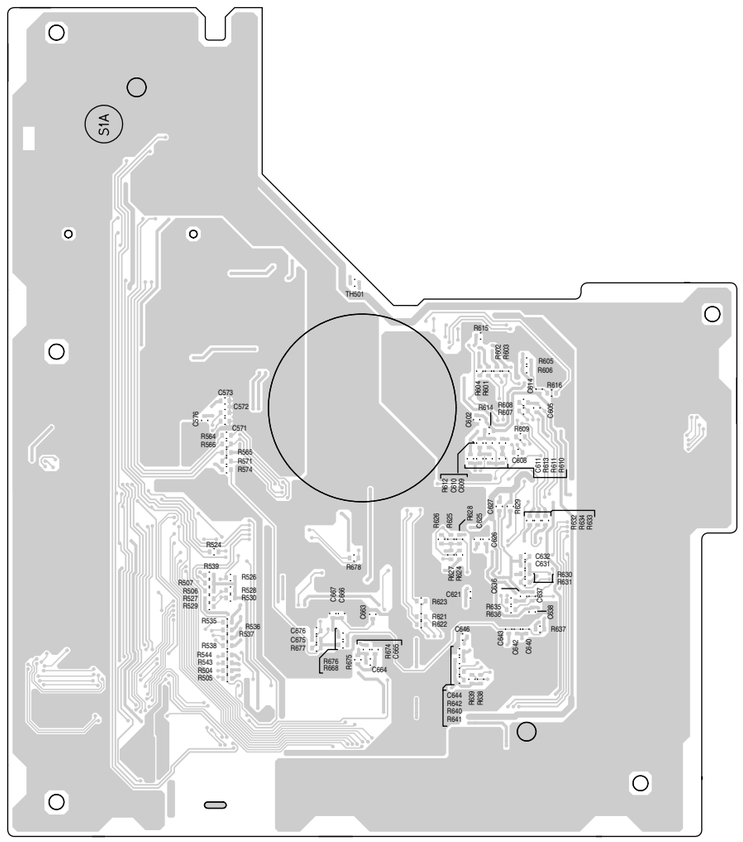
■ Front board

Reverse side



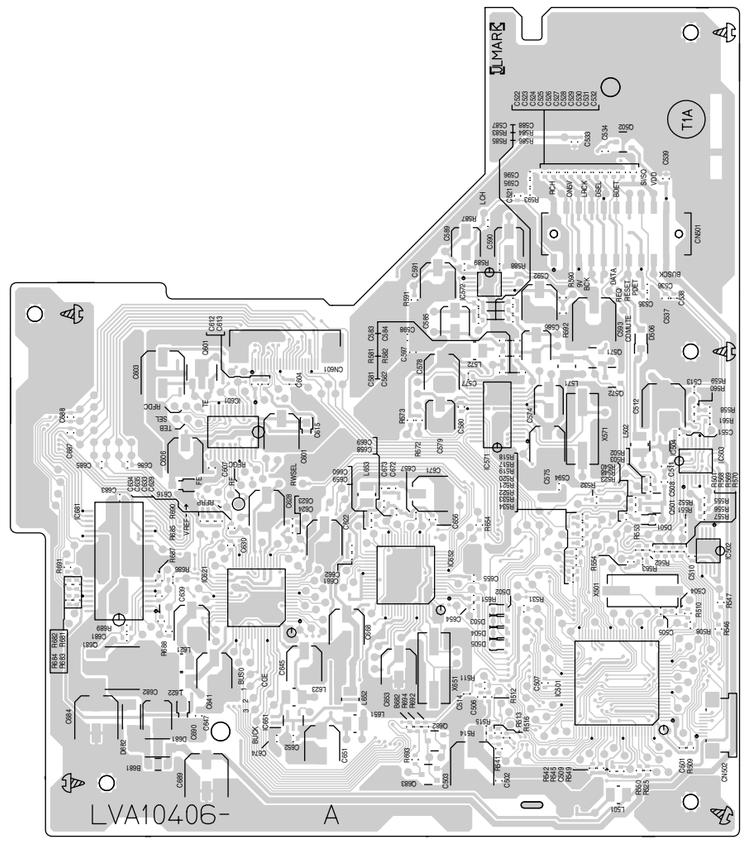
■ Mecha control board

Forward side



■ Mecha control board

Reverse side



< MEMO >

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(No.49838SCH)

Printed in Japan
2003/05

PARTS LIST

[KD-LH3150,KD-LH3100]

* All printed circuit boards and its assemblies are not available as service parts.

KD-LH3150

Area suffix

J ---------- U.S.A.
C ---------- Canada

KD-LH3100

Area suffix

J ---------- U.S.A.

- Contents -

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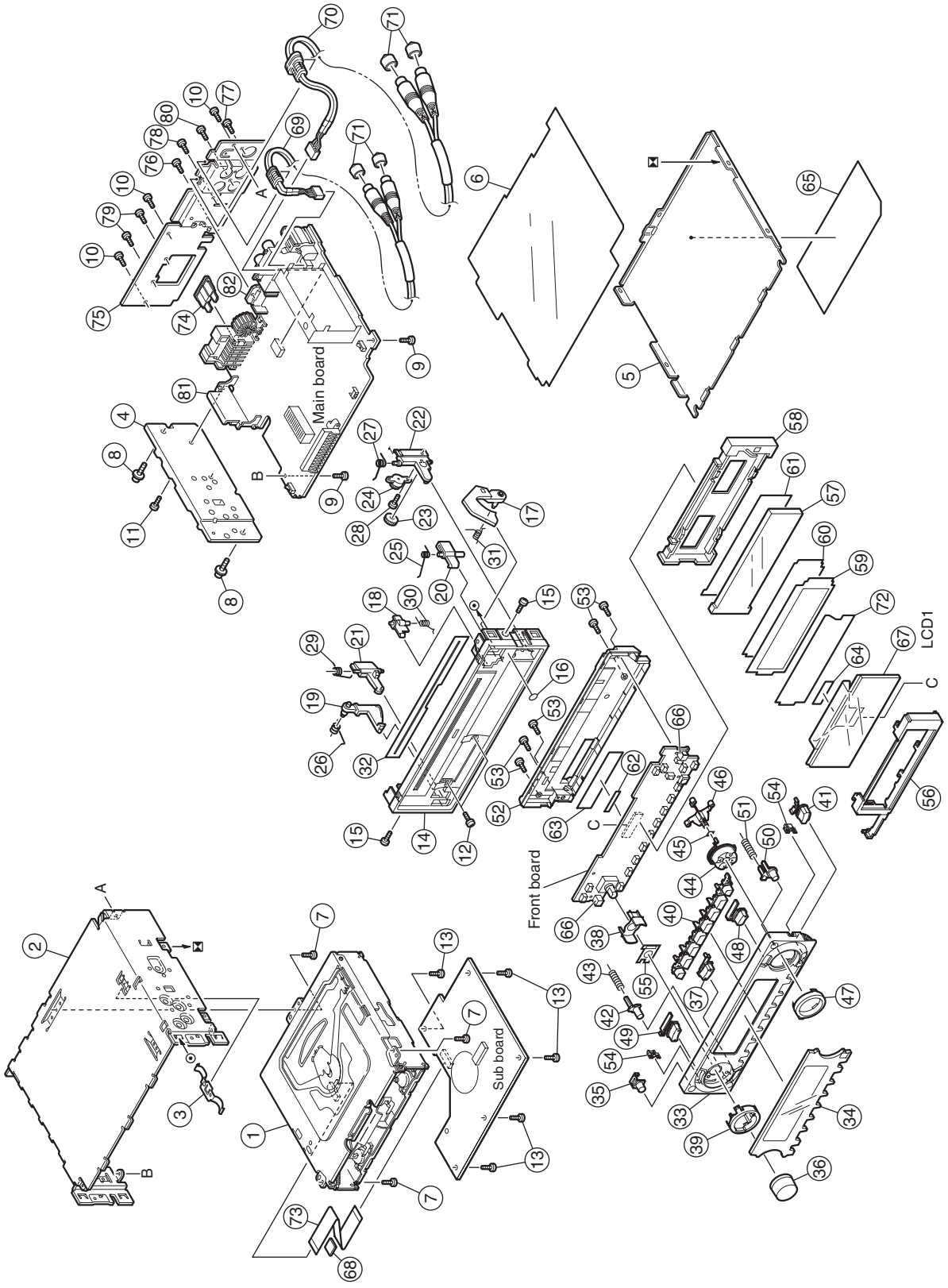
CD mechanism assembly and parts list (Block No.MB) ---------- 3-4
Electrical parts list (Block No.01~03) ---------- 3-6
Packing materials and accessories parts list (Block No.M3) ---------- 3-14

Exploded view of general assembly and parts list

Block No. M 1 M M



General assembly

Block No. [M][1][M][M]

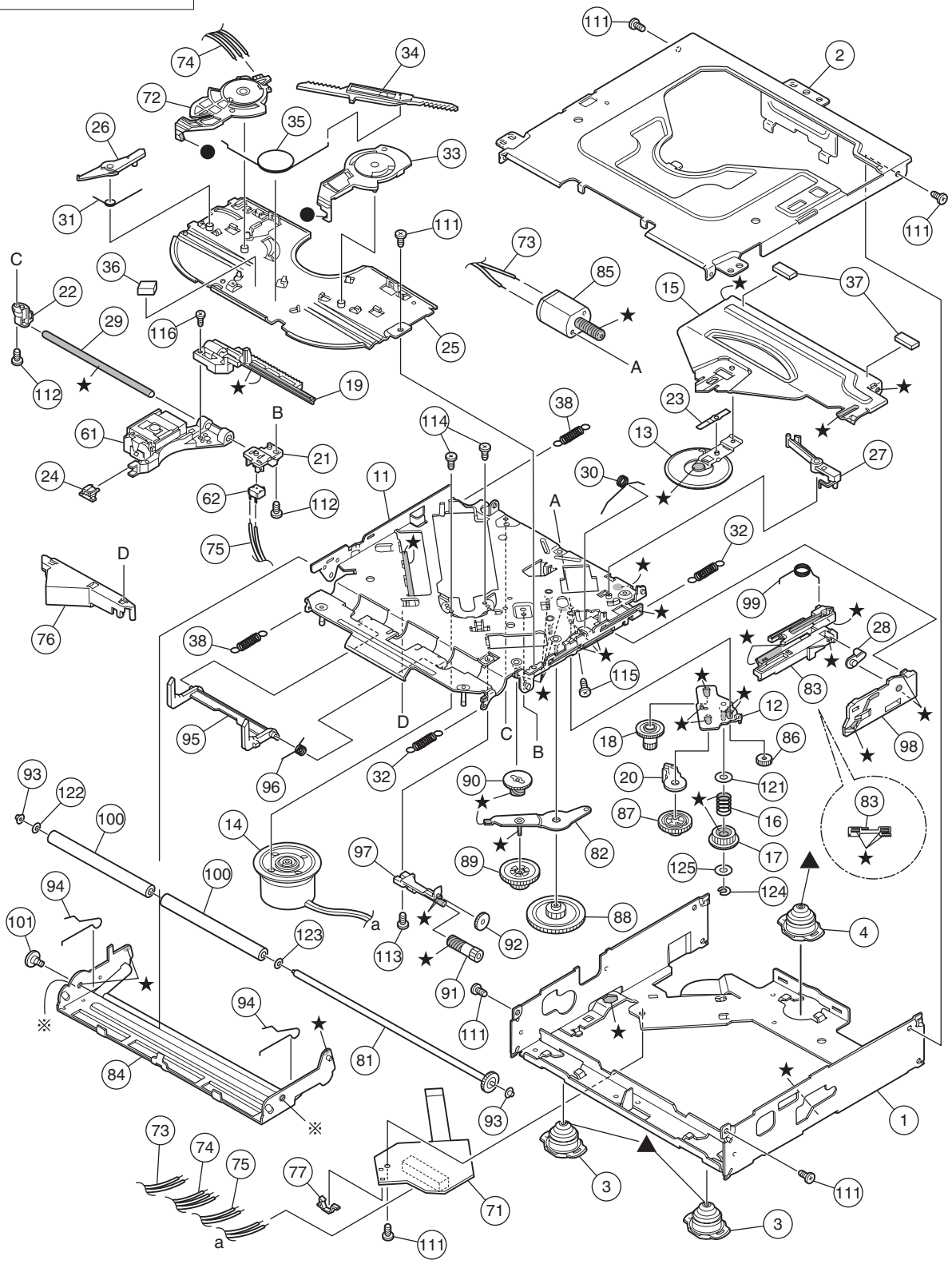
⚠ Symbol No.	Part No.	Part Name	Description	Local
1	----------	CD MECHA		
2	GE10043-210A	TOP CHASSIS		
3	GE40135-001A	EARTH PLATE		
4	GE30938-003A	HEAT SINK		
5	GE30393-002A	BOTTOM COVER		
6	FSMA3005-001	INSULATOR		
7	QYSDST2604Z	SCREW	2.6mm x 4mm(x3)	
8	FSKZ4005-001	SCREW	(x2)	
9	QYSDST2606Z	SCREW	2.6mm x 6mm(x2)	
10	QYSDST2604Z	SCREW	2.6mm x 4mm(x3)	
11	QYSDST2610Z	SCREW	2.6mm x 10mm	
12	QYSDSF2006M	SCREW	2mm x 6mm(x2)	
13	QYSDST2004Z	SCREW	2mm x 4mm(x5)	
14	GE30823-002A	F. CHASSIS ASSY		
15	QYSDST2004M	MINI SCREW	2mm x 4mm(x2)	
16	FSYH4036-046	SHEET		
17	GE30827-001A	OPEN LEVER		
18	GE30824-002A	LOCK LEVER(O.L)		
19	GE30826-001A	RELEASE LEVER		
20	GE30829-001A	LOCK LEVER(TOP)		
21	GE30825-001A	LOCK LEVER(L)		
22	GE30828-001A	LOCK LEVER(R)		
23	GE40154-001A	GEAR		
24	QZW0108-002	OIL DAMPER		
25	FSKW4012-002	T.SPRING		
26	VKW5264-005	T.SPRING		
27	GE40155-001A	T.SPRING		
28	QYSDSF2006M	SCREW	2mm x 6mm	
29	VKW5263-002	T.SPRING		
30	GE40157-001A	T.SPRING		
31	GE40153-001A	T.SPRING		
32	GE40156-001A	BLIND		
33	GE10061-003A	FRONT PANEL		LH3100J
33	GE10061-004A	FRONT PANEL		LH3150C,LH3150J
34	GE30917-002A	FINDER ASSY		LH3100J
34	GE30917-009A	FINDER ASSY		LH3150C
34	GE30917-001A	FINDER ASSY		LH3150J
35	GE30832-001A	POWER BUTTON		
36	GE30856-001A	KNOB		
37	GE30859-001A	SEL BUTTON		
38	GE30834-001A	RIM LENS		
39	GE30836-001A	RIM COVER(L)		
40	GE20152-001A	PRESET BUTTON		
41	GE30838-004A	CD BTN		
42	GE30934-001A	DETACH BUTTON		
43	GE30999-001A	COMP.SPRING		
44	GE30835-001A	NAVIGATION BTN		
45	FSYH4036-013	SHEET		
46	GE30937-002A	NAVI BASE		
47	GE30858-001A	RIM COVER(R)		
48	GE30860-001A	FM/AM BTN		
49	GE30861-002A	EQ BTN		
50	GE30914-002A	EJECT BUTTON		
51	VKW3001-330	COMP.SPRING		
52	GE10062-003A	REAR COVER		
53	VKZ4777-001	MINI SCREW	(x5)	
54	GE40158-001A	SIDE LENS	(x2)	
55	GE40174-001A	INSULATOR		
56	GE30837-001A	LCD CASE		
57	LV42850-002A	L.C.D.LENS		
58	LV33404-001A	LIGHT CASE		
59	LV42884-001A	LENS FILTER		
60	LV42995-001A	LENS FILTER		
61	LV42955-002A	LENS SHEET		
62	LV43084-001A	DOUBLE FACE		
63	LV40848-034A	SPACER		
64	LV40846-036A	SPACER		
65	GE30777-001A	NAME PLATE		LH3100J
65	GE30783-001A	NAME PLATE		LH3150C,LH3150J
66	GE30857-001A	LED HOLDER	(x2)	
67	QLD0232-001	LCD MODULE		
68	VYSH101-009	SPACER		
69	QAM0419-001	CAR PLUG CORD		
70	QAM0447-001	L-INCABLE		LH3150C,LH3150J
71	VYTA500-001	PIN CAP	(x2)	LH3100J
71	VYTA500-001	PIN CAP	(x4)	LH3150C,LH3150J
72	LV42894-001A	BRIGHT SHEET		
73	QUQ105-2207AE	FFC WIRE		
⚠ 74	QMFZ047-150-T	FUSE	15A	
75	GE30912-006A	REAR BRACKET		
76	QYSDST2606Z	SCREW	2.6mm x 6mm	
77	QYSDST2606Z	SCREW	2.6mm x 6mm	
78	QYSDST2606Z	SCREW	2.6mm x 6mm	
79	QYSDSF2606Z	SCREW	2.6mm x 6mm(x2)	
80	QYSDSF2606Z	SCREW	2.6mm x 6mm	
81	GE40172-002A	IC BRACKET		
82	GE40124-001A	REG BRACKET		

CD mechanism assembly and parts list

Block No. M B M M

TN-2001-1013

Grease
- ★ TNG-87
- ※ GP-501MK
- ● CFD-005Z
- ▲ GP-501A



CD mechanism

Block No. [M][B][M][M]

⚠ Symbol No.	Part No.	Part Name	Description	Local
1	30320101T	FRAME		
2	30320102T	TOP COVER		
3	30320115T	DANPER F	(x2)	
4	30320116T	DANPER R		
11	303205505T	CHASSIS RIVET		
12	303205503T	CHANGE P. RVT A		
13	303205301T	CLAMPER ASSY		
14	303205304T	SPINDLE MOTOR A		
15	30320502T	CLAMPER ARM		
16	30320503T	CHANGE GEAR SPG		
17	30320505T	CHANGE GEAR 2		
18	30320506T	FEED GEAR		
19	30320507T	FEED RACK		
20	30320509T	CHANGE LOCK RAR		
21	30320510T	FEED SW HOLDER		
22	30320511T	PU SHAFT HOLDER		
23	30320513T	CLAMPER SUB SPG		
24	30320514T	FD SUB HOLDER		
25	30320518T	TOP PLATE		
26	30320519T	SELECT LOCK ARM		
27	30320520T	TRIGGER ARM		
28	30320521T	SLIDE HOOK		
29	30320522T	PU SHAFT		
30	30320525T	CLAMPER ARM SPG		
31	30320526T	SELECT L ARM SP		
32	30320538T	SUSPENSION SP R	(x2)	
33	30320529T	SELECT ARM R		
34	30320530T	LINK PLATE		
35	30320531T	LINK PLATE SPG		
36	30320523T	CUSHION F		
37	30320524T	CUSHION R	(x2)	
38	30320539T	SUSPENSION SP L	(x2)	
61	69011614T	PICKUP OPT-725		
62	64180406T	DET SW ESE22		
71	303210302T	CONN BOARD ASSY		
72	30321002T	MODE SW		
73	30321003T	LOAD MOTOR WIRE		
74	30321005T	MODE SW WIRE		
75	30321009T	SL WIRE		
76	30321011T	WIRE HOLDER		
77	19501403T	WIRE CLUMPER		
81	303211301T	ROLLER SHAFT AS		
82	303211501T	L GEAR PLATE RV		
83	303211302T	LOADING PLATE A		
84	303211502T	LOCK ARM RV ASS		
85	303211303T	L/F MOTOR ASSY		
86	30321101T	LOADING GEAR 1		
87	30321102T	LOADING GEAR 2		
88	30321103T	LOADING GEAR 3		
89	30321104T	LOADING GEAR 4		
90	30321105T	LOADING GEAR 5		
91	30321106T	LOADING GEAR 6		
92	30321107T	LOADING GEAR 7		
93	30321111T	ROLLER GUIDE	(x2)	
94	30321114T	ROLLER GUIDE SP	(x2)	
95	30321116T	DISC STOPPER AR		
96	30321117T	DISC ST ARM SPG		
97	30321118T	LD GEAR BRACKET		
98	30321125T	L SIDE PLATE		
99	30321131T	LOAD PLATE SPG		
100	30321133T	LDG ROLLER	(x2)	
101	18211223T	COLLAR SCREW		
111	9P0420031T	SCREW	(x6)	
112	9P0420041T	TAP.SCREW	(x2)	
113	9B0320041T	SCREW		
114	9C0117183T	SCREW	(x2)	
115	9C0120203T	SCREW		
116	9C0317503T	SCREW		
121	9W0130170T	PW 3.5X8X0.3		
122	9W0513060T	HL WASHER		
123	9W0710070T	L WASHER		
124	9E0100152T	E RING		
125	9W0113020T	PW 2.1X4X0.13		

Electrical parts list

Main board

Block No. [0][1][0][0]

⚠ Symbol No.	Part No.	Part Name	Description	Local
IC131	BU4066BCFV-X	IC		
IC132	NJM4565V-X	IC		
IC281	BA3220FV-X	IC		LH3150C,LH3150J
IC301	BA3220FV-X	IC		LH3150C,LH3150J
IC701	UPD784217AGC205	IC		
IC702	IC-PST9333U-X	IC		
IC703	BR24L16F-W-X	IC		
IC781	HD74HC126FP-X	IC		
IC901	HA13164A	IC		
IC911	TDA7404D-X	IC		
IC912	M62449FP-X	IC		
IC921	NJM2360AM-X	IC		
IC951	LA47505	IC		
Q1	2SB624/4/-X	TRANSISTOR		
Q2	UN2211-X	TRANSISTOR		
Q3	2SB624/4/-X	TRANSISTOR		
Q121	2SD1781K/QR/-X	TRANSISTOR		
Q122	2SD1781K/QR/-X	TRANSISTOR		
Q131	UN2211-X	TRANSISTOR		
Q132	UN2211-X	TRANSISTOR		
Q133	2SC2412K/RS/-X	TRANSISTOR		
Q191	2SD601A/R/-X	TRANSISTOR		
Q221	2SD1781K/QR/-X	TRANSISTOR		
Q222	2SD1781K/QR/-X	TRANSISTOR		
Q701	UN2213-X	DIGI TRANSISTOR		
Q702	UN2214-X	TRANSISTOR		
Q703	UN2211-X	TRANSISTOR		
Q750	UN2211-X	TRANSISTOR		
Q751	UN2211-X	TRANSISTOR		
Q752	UN2213-X	DIGI TRANSISTOR		
Q753	UN2211-X	TRANSISTOR		
Q754	UN2211-X	TRANSISTOR		
Q795	UN2211-X	TRANSISTOR		
Q901	UN2111-X	TRANSISTOR		
Q902	UN2211-X	TRANSISTOR		
Q903	2SB709A/QR/-X	TRANSISTOR		
Q904	2SD601A/R/-X	TRANSISTOR		
Q941	UN2111-X	TRANSISTOR		
Q942	UN2111-X	TRANSISTOR		
Q951	UN2211-X	TRANSISTOR		
D1	1SS355-X	SI DIODE		
D2	1SS355-X	SI DIODE		
D3	MA152WK-X	DIODE		
D121	MA152WA-X	DIODE		
D131	MA152WK-X	DIODE		
D192	1SS355-X	SI DIODE		
D193	1SS355-X	SI DIODE		
D221	MA152WA-X	DIODE		
D701	1SS355-X	SI DIODE		
D702	1SS355-X	SI DIODE		
D703	1SS355-X	SI DIODE		
D704	1SS355-X	SI DIODE		
D711	UDZS6.2B-X	Z DIODE		
D712	UDZS6.2B-X	Z DIODE		
D713	UDZS6.2B-X	Z DIODE		
D714	UDZS6.2B-X	Z DIODE		
D715	UDZS6.2B-X	Z DIODE		
D716	UDZS6.2B-X	Z DIODE		
D717	SML-310LT/MN/-X	LED		
D718	SML-310LT/MN/-X	LED		
D719	SML-310LT/MN/-X	LED		
D720	UDZS6.2B-X	Z DIODE		
D901	1N5404-TU-15	DIODE		
D904	RB160M-30-X	SB DIODE		
D905	RB160M-30-X	SB DIODE		
D921	RB160M-30-X	SB DIODE		
D941	UDZS11B-X	Z DIODE		
D942	1SS355-X	SI DIODE		
D951	1SS355-X	SI DIODE		
C1	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C2	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C3	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C4	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C6	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C7	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C10	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C25	NCS31HJ-331X	C CAPACITOR	330pF 50V J	
C27	QERF1HM-104Z	E CAPACITOR	0.1uF 50V M	
C101	NCB31EK-223X	C CAPACITOR	0.022uF 25V K	
C102	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C103	NCS31HJ-821X	C CAPACITOR	820pF 50V J	
C104	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C110	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C115	NFV81CM-105X	TS E. CAPACITOR	1uF 16V M	
C116	NFV81CM-105X	TS E. CAPACITOR	1uF 16V M	
C117	NCB31HK-331X	C CAPACITOR	330pF 50V K	
C118	NCB31HK-331X	C CAPACITOR	330pF 50V K	
C120	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C122	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C123	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C124	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C125	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C126	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C127	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C131	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C132	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C133	NCB31EK-273X	C CAPACITOR	0.027uF 25V K	
C134	NCB31EK-273X	C CAPACITOR	0.027uF 25V K	
C135	NCB31HK-562X	C CAPACITOR	5600pF 50V K	
C136	NCB31EK-123X	C CAPACITOR	0.012uF 25V K	
C137	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C138	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C139	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C140	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C141	NCB31EK-823X	C CAPACITOR	0.082uF 25V K	
C142	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C143	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C144	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C151	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	LH3150C,LH3150J
C152	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	LH3150C,LH3150J
C161	NCS31HJ-101X	C CAPACITOR	100pF 50V J	LH3150C,LH3150J
C162	QERF1HM-105Z	E CAPACITOR	1uF 50V M	LH3150C,LH3150J
C165	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	LH3150C,LH3150J
C166	QERF1HM-105Z	E CAPACITOR	1uF 50V M	LH3150C,LH3150J
C181	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C191	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C192	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
C193	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C194	QERF1HM-224Z	E CAPACITOR	0.22uF 50V M	
C201	NCB31EK-223X	C CAPACITOR	0.022uF 25V K	
C202	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C203	NCS31HJ-821X	C CAPACITOR	820pF 50V J	
C204	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C210	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C215	NFV81CM-105X	TS E. CAPACITOR	1uF 16V M	
C216	NFV81CM-105X	TS E. CAPACITOR	1uF 16V M	
C217	NCB31HK-331X	C CAPACITOR	330pF 50V K	
C218	NCB31HK-331X	C CAPACITOR	330pF 50V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C224	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C251	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	LH315 0C,LH 3150J
C252	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	LH315 0C,LH 3150J
C254	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C255	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C261	NCS31HJ-101X	C CAPACITOR	100pF 50V J	LH315 0C,LH 3150J
C262	QERF1HM-105Z	E CAPACITOR	1uF 50V M	LH315 0C,LH 3150J
C263	NCB31EK-273X	C CAPACITOR	0.027uF 25V K	
C264	NCB31CK-393X	C CAPACITOR	0.039uF 16V K	
C265	NCB31HK-123X	C CAPACITOR	0.012uF 50V K	
C266	NCB31HK-153X	C CAPACITOR	0.015uF 50V K	
C267	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C268	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C269	NCB31HK-182X	C CAPACITOR	1800pF 50V K	
C270	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C271	NCB31CK-823X	C CAPACITOR	0.082uF 16V K	
C272	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C281	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	LH315 0C,LH 3150J
C282	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	LH315 0C,LH 3150J
C283	QERF1CM-476Z	E CAPACITOR	47uF 16V M	LH315 0C,LH 3150J
C284	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	LH315 0C,LH 3150J
C287	QERF1AM-107Z	E CAPACITOR	100uF 10V M	LH315 0C,LH 3150J
C288	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C289	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C290	QERF1AM-107Z	E CAPACITOR	100uF 10V M	LH315 0C,LH 3150J
C294	QERF1AM-107Z	E CAPACITOR	100uF 10V M	LH315 0C,LH 3150J
C301	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	LH315 0C,LH 3150J
C302	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	LH315 0C,LH 3150J
C303	QERF1CM-476Z	E CAPACITOR	47uF 16V M	LH315 0C,LH 3150J
C304	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	LH315 0C,LH 3150J
C307	QERF1AM-107Z	E CAPACITOR	100uF 10V M	LH315 0C,LH 3150J
C308	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C309	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C310	QERF1AM-107Z	E CAPACITOR	100uF 10V M	LH315 0C,LH 3150J
C351	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C352	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C361	NCB31CK-823X	C CAPACITOR	0.082uF 16V K	
C362	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C363	NCB31EK-273X	C CAPACITOR	0.027uF 25V K	
C364	NCB31CK-393X	C CAPACITOR	0.039uF 16V K	
C365	NCB31HK-123X	C CAPACITOR	0.012uF 50V K	
C366	NCB31HK-153X	C CAPACITOR	0.015uF 50V K	
C367	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
C368	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C369	NCB31HK-182X	C CAPACITOR	1800pF 50V K	
C370	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C701	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C702	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C703	NCS31HJ-8R0X	C CAPACITOR	8pF 50V J	
C704	NCS31HJ-270X	C CAPACITOR	27pF 50V J	
C705	NCS31HJ-270X	C CAPACITOR	27pF 50V J	
C706	NCS31HJ-220X	C CAPACITOR	22pF 50V J	
C707	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C708	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C709	NCS31HJ-471X	C CAPACITOR	470pF 50V J	
C710	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C711	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C713	QERF0JM-476Z	E CAPACITOR	47uF 6.3V M	
C714	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C715	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C716	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C717	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C751	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C752	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C753	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C755	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C768	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C769	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C781	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C795	QERF1HM-105Z	E CAPACITOR	1uF 50V M	
C901	QEZ0625-338	E CAPACITOR	3300uF	
C902	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
C903	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
C904	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C905	QERF1AM-107Z	E CAPACITOR	100uF 10V M	
C906	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C907	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C908	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C910	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C911	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C912	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C914	QEKJ1CM-226Z	E CAPACITOR	22uF 16V M	
C917	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C920	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C921	QERF1AM-227Z	E CAPACITOR	220uF 10V M	
C922	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C923	QERF1CM-107Z	E CAPACITOR	100uF 16V M	
C924	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C929	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C930	QERF1CM-106Z	E CAPACITOR	10uF 16V M	
C941	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C942	QERF0JM-107Z	E CAPACITOR	100uF 6.3V M	
C945	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	LH315 0C,LH 3150J
C951	QERF1CM-476Z	E CAPACITOR	47uF 16V M	
C952	NCB31AK-224X	C CAPACITOR	0.22uF 10V K	
C953	QERF1CM-107Z	E CAPACITOR	100uF 16V M	
C954	QERF1CM-226Z	E CAPACITOR	22uF 16V M	
C955	QERF1EM-475Z	E CAPACITOR	4.7uF 25V M	
C956	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C957	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C958	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C959	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C961	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C962	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C963	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C964	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C965	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C966	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C967	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C968	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C969	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C970	QERF1HM-225Z	E CAPACITOR	2.2uF 50V M	
C971	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C972	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
R1	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R2	NRSA63J-270X	MG RESISTOR	27Ω 1/16W J	
R3	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R4	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
R5	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R6	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R7	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R8	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R9	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R10	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R11	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R30	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R101	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R102	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R111	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R113	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R114	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R115	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	LH3100J
R115	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	LH3150C,LH3150J
R116	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R117	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	LH3150C,LH3150J
R118	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	LH3150C,LH3150J
R119	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	LH3100J
R119	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	LH3150C,LH3150J
R121	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R122	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R123	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R124	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R125	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R126	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R127	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
R129	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R131	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R132	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R133	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R134	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R135	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R136	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R137	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R138	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R139	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R140	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R141	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R142	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R143	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R144	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R145	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R146	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R147	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R148	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R149	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R161	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	LH3150C,LH3150J
R182	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R183	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R184	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R191	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R192	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J	
R193	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R194	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R195	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R196	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R197	NRSA63J-274X	MG RESISTOR	270kΩ 1/16W J	
R201	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R202	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R211	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R213	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R214	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R215	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	LH3100J
R215	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	LH3150C,LH3150J
R216	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R217	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	LH3150C,LH3150J
R218	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	LH3150C,LH3150J
R219	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	LH3100J
R219	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	LH3150C,LH3150J
R221	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R222	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R223	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R224	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R225	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R226	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R229	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R261	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	LH3150C,LH3150J
R282	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R291	NRSA63J-243X	MG RESISTOR	24kΩ 1/16W J	LH3150C,LH3150J
R292	NRSA63J-243X	MG RESISTOR	24kΩ 1/16W J	LH3150C,LH3150J
R293	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	LH3150C,LH3150J
R294	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	LH3150C,LH3150J
R295	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J	LH3150C,LH3150J
R301	NRSA63J-243X	MG RESISTOR	24kΩ 1/16W J	LH3150C,LH3150J
R302	NRSA63J-243X	MG RESISTOR	24kΩ 1/16W J	LH3150C,LH3150J
R303	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	LH3150C,LH3150J
R304	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	LH3150C,LH3150J
R305	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J	LH3150C,LH3150J
R708	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R709	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R710	NRSA63J-106X	MG RESISTOR	10MΩ 1/16W J	
R711	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R712	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R713	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R714	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R716	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R717	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R718	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R719	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R720	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R721	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R722	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R724	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R725	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R726	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R727	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R728	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R729	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R730	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R731	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
R732	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
R733	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R734	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R735	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R736	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R737	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R739	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R742	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R743	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R744	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R745	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R746	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R747	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R748	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R749	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R750	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R751	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R754	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R755	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R756	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R757	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R758	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R759	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R760	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R762	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R767	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R773	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R774	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R775	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R776	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R777	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R778	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R779	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R780	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R781	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R782	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R783	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R784	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R785	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R786	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R787	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R788	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R789	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R790	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R791	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R792	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R793	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R795	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R797	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R798	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R799	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R901	NRSA63J-912X	MG RESISTOR	9.1kΩ 1/16W J	
R902	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R903	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R904	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R905	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R906	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R908	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R909	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R910	QRE142J-102X	C RESISTOR	1kΩ 1/4W J	
R911	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R912	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R913	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R914	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R915	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R917	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R918	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R919	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R921	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R922	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R923	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R924	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R925	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R926	NRSA63D-473X	MG RESISTOR	47kΩ 1/16W D	
R927	NRSA63D-472X	MG RESISTOR	4.7kΩ 1/16W D	
R928	NRSA63D-273X	MG RESISTOR	27kΩ 1/16W D	
R929	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R951	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R953	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R954	NRSA63J-4R7X	MG RESISTOR	4.7Ω 1/16W J	
R955	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R961	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R962	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R963	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R981	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R982	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R984	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R985	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R986	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R987	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R989	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R990	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	LH3150C,LH3150J
R992	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R993	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R996	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R997	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R998	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R999	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L1	NQL114K-100X	COIL	10uH K	
L701	NQL114K-470X	INDUCITOR	47uH K	
L702	NQL114K-470X	INDUCITOR	47uH K	
L753	NQL114K-470X	INDUCITOR	47uH K	
L901	QQR1378-001	CHOKE COIL		
L921	NQLZ007-151X	COIL	150uH	
L922	NQL114M-4R7X	COIL	4.7uH M	
BZ795	QAN0023-001Z	BUZZER		
CN131	QGA2006C1-04	CONNECTOR	W-B (1-4)	
CN141	QGA2006F1-04	CONNECTOR	W-B (1-4)	LH3150C,LH3150J
CN601	QGB2027M4-22S	CONNECTOR	B-B (1-22)	
CN701	QNZ0605-001	CAR CONNECTOR		
CN901	QNZ0611-001	16P CONNECTOR		
CN902	QNZ0095-001	CONNECTOR		
J1	QNB0100-002	CAR ANT JACK		
J121	QNN0490-001	PIN JACK		
PP1	QZW0010-001	STYLE PIN		LH3150C,LH3150J
S701	QSW0451-001	DETECT SW		
S702	QSW0451-001	DETECT SW		
S703	QSQ1A11-V06Z	TACT SW I/M		
TU1	QAU0204-002	TUNER		
X701	QAX0617-001Z	CRYSTAL	12.500MHz	
X702	QAX0401-001	CRYSTAL	32.768KHz	

Front board

Block No. [0][2][0][0]

⚠ Symbol No.	Part No.	Part Name	Description	Local
IC801	MN102H60KCG	IC		
IC802	LH28F160BJHET92	I.C (FLASH ROM)		
IC803	IC-PST3424U-X	IC		
IC804	NJU7241F33-X	IC		
IC805	RPM6938-SV4	REMOCON RCV		
Q401	UN2211-X	TRANSISTOR		
Q402	UN2211-X	TRANSISTOR		
Q403	UN2211-X	TRANSISTOR		
Q404	UN2211-X	TRANSISTOR		
Q405	UN2211-X	TRANSISTOR		
Q406	UN2211-X	TRANSISTOR		
Q407	UN2211-X	TRANSISTOR		
Q408	2SD601A/R/-X	TRANSISTOR		
Q409	2SD601A/R/-X	TRANSISTOR		
Q410	2SD601A/R/-X	TRANSISTOR		
Q411	2SD601A/R/-X	TRANSISTOR		
Q412	2SD601A/R/-X	TRANSISTOR		
Q413	2SD601A/R/-X	TRANSISTOR		
Q414	2SD601A/R/-X	TRANSISTOR		
Q415	2SD601A/R/-X	TRANSISTOR		
Q416	2SD601A/R/-X	TRANSISTOR		
Q417	2SD601A/R/-X	TRANSISTOR		
Q418	2SD601A/R/-X	TRANSISTOR		
Q419	2SD601A/R/-X	TRANSISTOR		
Q420	2SD601A/R/-X	TRANSISTOR		
Q421	2SD601A/R/-X	TRANSISTOR		
Q422	2SD601A/R/-X	TRANSISTOR		

⚠ Symbol No.	Part No.	Part Name	Description	Local
Q423	2SD601A/R/-X	TRANSISTOR		
Q424	2SD601A/R/-X	TRANSISTOR		
Q425	2SD601A/R/-X	TRANSISTOR		
Q428	2SD601A/R/-X	TRANSISTOR		
Q801	2SB709A/QR/-X	TRANSISTOR		
Q802	2SB709A/QR/-X	TRANSISTOR		
Q803	2SD601A/R/-X	TRANSISTOR		
Q804	UN2111-X	TRANSISTOR		
D401	MA152WK-X	DIODE		
D402	SML-310LT/MN/-X	LED		
D403	SML-310LT/MN/-X	LED		
D405	SML-310LT/MN/-X	LED		
D406	SML-310LT/MN/-X	LED		
D407	SML-310LT/MN/-X	LED		
D408	SML-310LT/MN/-X	LED		
D409	SML-310LT/MN/-X	LED		
D410	SML-310LT/MN/-X	LED		
D411	SML-310LT/MN/-X	LED		
D412	SML-310LT/MN/-X	LED		
D413	SML310BAT/JKL-X	LED		
D414	SML310BAT/JKL-X	LED		
D415	SML-310LT/MN/-X	LED		
D416	SML-310LT/MN/-X	LED		
D417	SML-310LT/MN/-X	LED		
D418	SML-310LT/MN/-X	LED		
D419	SML-310LT/MN/-X	LED		
D420	SML-310LT/MN/-X	LED		
D421	SML-310LT/MN/-X	LED		
D422	SML-310LT/MN/-X	LED		
D423	UDZS6.2B-X	Z DIODE		
D424	UDZS6.2B-X	Z DIODE		
D425	UDZS6.2B-X	Z DIODE		
D426	UDZS6.2B-X	Z DIODE		
D427	UDZS6.2B-X	Z DIODE		
D428	UDZS6.2B-X	Z DIODE		
D429	UDZS6.2B-X	Z DIODE		
D430	UDZS6.2B-X	Z DIODE		
D431	UDZS6.2B-X	Z DIODE		
D435	NSPB310A/WRST/	LED		
D436	NSPB310A/WRST/	LED		
D451	NSCM315C-W	LED		
D452	NSCM315C-W	LED		
D453	NSCM315C-W	LED		
D801	MA152WK-X	DIODE		
D803	1SS355-X	SI DIODE		
D804	UDZS6.2B-X	Z DIODE		
D805	UDZS6.2B-X	Z DIODE		
D806	UDZS6.2B-X	Z DIODE		
D807	UDZS6.2B-X	Z DIODE		
D808	UDZS6.2B-X	Z DIODE		
D809	UDZS6.2B-X	Z DIODE		
D810	UDZS6.2B-X	Z DIODE		
D811	UDZS6.2B-X	Z DIODE		
D812	UDZS6.2B-X	Z DIODE		
C451	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C452	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C453	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C454	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C455	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C456	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C457	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C458	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C459	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C801	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C802	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C804	NCS31HJ-471X	C CAPACITOR	470pF 50V J	
C805	NCS31HJ-471X	C CAPACITOR	470pF 50V J	
C806	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C807	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
C808	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
C809	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
C810	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C811	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C812	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
C813	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C814	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C815	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
C816	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
C817	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C818	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C819	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C820	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C821	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C822	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C823	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C824	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C825	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C826	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C827	NCB31EK-473X	C CAPACITOR	0.047uF 25V K	
C828	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C829	NBE20JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
C831	NBE21VM-104X	TA E CAPACITOR	0.1uF 35V M	
C832	NDC31HJ-300X	C CAPACITOR	30pF 50V J	
C833	NDC31HJ-300X	C CAPACITOR	30pF 50V J	
C834	NBE21CM-105X	TA E CAPACITOR	1uF 16V M	
C835	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
R401	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R402	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R403	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R404	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R405	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R406	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R407	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R408	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R409	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R410	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R411	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R412	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R413	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R414	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R415	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R416	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R417	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R418	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R419	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R420	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R421	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R422	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R423	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R424	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R425	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R426	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R427	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R428	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R429	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R430	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R431	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R432	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R433	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R434	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R435	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R436	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R437	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R438	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R439	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R440	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R441	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R442	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R443	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R444	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R445	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R446	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R447	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R452	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R453	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R454	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R455	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R456	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R457	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R471	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R472	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R473	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R474	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R475	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R476	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R477	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R478	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R479	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R801	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R803	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R804	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R806	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R807	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R808	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R809	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R810	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R811	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R812	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R813	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R814	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R815	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R816	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R817	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R818	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R819	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R820	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R821	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R822	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R823	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R824	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R825	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R826	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R827	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R828	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R829	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R830	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R831	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R832	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R833	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R834	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R835	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R836	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R837	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R838	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R839	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R841	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R842	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R843	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R844	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R845	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R846	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R847	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R848	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R849	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R850	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R851	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R852	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R853	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R854	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R855	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R856	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R857	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R858	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R859	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R860	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R861	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R862	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R863	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R864	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R865	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R866	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R867	NRSA63J-225X	MG RESISTOR	2.2MΩ 1/16W J	
R868	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R869	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R870	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R871	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R872	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R873	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R874	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R877	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R878	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J	
R879	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
R880	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R881	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R882	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R883	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J	
R884	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
R885	NRSA63J-301X	MG RESISTOR	300Ω 1/16W J	
R886	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J	
R887	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R888	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R889	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R890	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R891	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R892	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R893	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R894	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R895	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R896	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R897	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R898	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R899	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L801	NQL114K-470X	INDUCITOR	47uH K	
CN801	NNZ0087-001	CAR CONNECTOR		
CN802	QGF0523F1-40W	CONNECTOR	FFC/FPC (1-40)	
EN801	QSW0976-001	ROTARY ENCODER		
S802	NSW0066-001X	TACT SW		
S803	NSW0066-001X	TACT SW		
S804	NSW0066-001X	TACT SW		
S805	NSW0066-001X	TACT SW		
S806	NSW0066-001X	TACT SW		
S807	NSW0066-001X	TACT SW		
S808	NSW0066-001X	TACT SW		
S809	NSW0066-001X	TACT SW		
S810	NSW0066-001X	TACT SW		
S811	NSW0066-001X	TACT SW		
S812	NSW0066-001X	TACT SW		
S813	NSW0066-001X	TACT SW		
S814	NSW0066-001X	TACT SW		
S815	NSW0066-001X	TACT SW		
S816	NSW0066-001X	TACT SW		
S817	NSW0066-001X	TACT SW		
S818	NSW0066-001X	TACT SW		
TH801	NAD0022-103X	N THERMISTOR	10kΩ 10mW F	
X801	NAX0586-001X	RESONATOR	25.000MHz	

Sub board

Block No. [0][3][0][0]

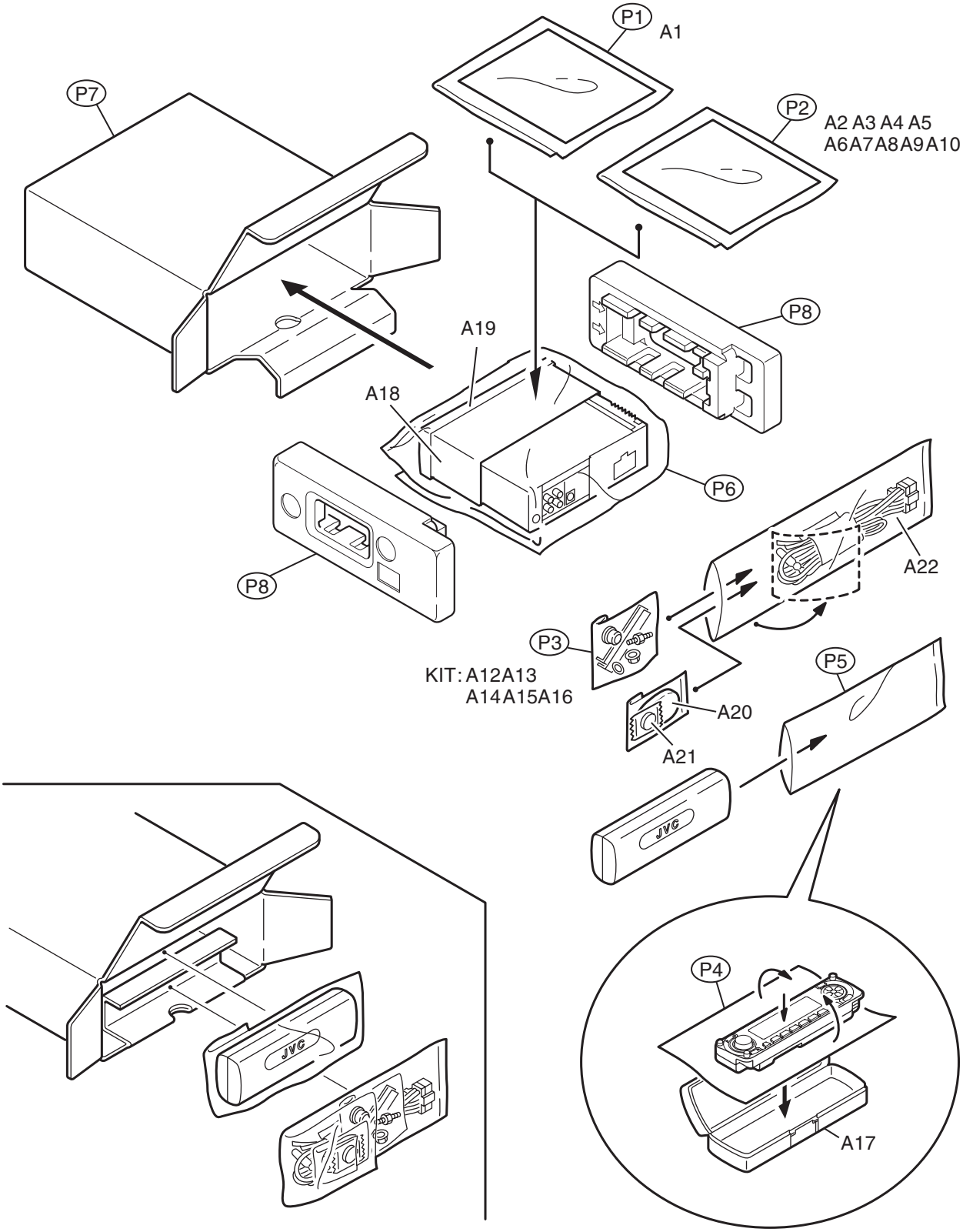
⚠ Symbol No.	Part No.	Part Name	Description	Local
IC501	TMP91CW12AF4R31	IC		
IC503	HD74HCT126T-X	IC		
IC504	NJU7241F33-X	IC		
IC571	PCM1716E-X	IC		
IC572	NJM4565V-X	IC		
IC601	TA2157FN-X	RF AMP IC		
IC621	TC94A14FA	CD LSI IC		
IC651	NJU7241F25-X	IC		
IC652	TC94A20F-008	IC		
IC681	BA5830FP-X	IC		
Q501	UN2111-X	TRANSISTOR		
Q502	UN2211-X	TRANSISTOR		
Q571	UN2111-X	TRANSISTOR		
Q572	UN2211-X	TRANSISTOR		
Q601	2SB1132/QR/-W	TRANSISTOR		
Q681	2SB1184/QR/-X	TRANSISTOR		
D501	1SS355-X	SI DIODE		
D502	1SS355-X	SI DIODE		
D503	1SS355-X	SI DIODE		
D504	1SS355-X	SI DIODE		

⚠ Symbol No.	Part No.	Part Name	Description	Local
D505	1SS355-X	SI DIODE		
D506	RB160M-30-X	SB DIODE		
D682	1SR154-400-X	DIODE		
C501	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C502	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C503	NEAD0JM-107X	E CAPACITOR	100uF 6.3V M	
C504	NDC31HJ-270X	C CAPACITOR	27pF 50V J	
C505	NDC31HJ-220X	C CAPACITOR	22pF 50V J	
C506	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C507	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C508	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C509	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C510	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C511	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C512	NEAD0JM-107X	E CAPACITOR	100uF 6.3V M	
C513	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C514	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C551	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C571	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
C572	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
C573	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C574	NEAD1CM-106X	E CAPACITOR	10uF 16V M	
C575	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C576	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C577	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C578	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C579	NEAD1CM-106X	E CAPACITOR	10uF 16V M	
C580	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C581	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C582	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C583	NCS31HJ-821X	C CAPACITOR	820pF 50V J	
C584	NCS31HJ-821X	C CAPACITOR	820pF 50V J	
C585	NEAD1VM-475X	E CAPACITOR	4.7uF 35V M	
C586	NEAD1VM-475X	E CAPACITOR	4.7uF 35V M	
C587	NCS31HJ-121X	C CAPACITOR	120pF 50V J	
C588	NCS31HJ-121X	C CAPACITOR	120pF 50V J	
C589	NEAD1VM-475X	E CAPACITOR	4.7uF 35V M	
C590	NEAD1VM-475X	E CAPACITOR	4.7uF 35V M	
C591	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C592	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C593	NEAD1CM-476X	E CAPACITOR	47uF 16V M	
C594	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	
C595	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C596	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C597	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	
C598	NCS31HJ-102X	C CAPACITOR	1000pF 50V J	
C601	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C602	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C603	NEAD0JM-107X	E CAPACITOR	100uF 6.3V M	
C604	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C605	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C606	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C607	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C608	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C609	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C610	NDC31HJ-5R0X	C CAPACITOR	5pF 50V J	
C611	NCS31HJ-680X	C CAPACITOR	68pF 50V J	
C612	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C613	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C614	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C616	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C621	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C622	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C623	NCS31HJ-470X	C CAPACITOR	47pF 50V J	
C624	NCB31HK-153X	C CAPACITOR	0.015uF 50V K	
C625	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C626	NCB31HK-272X	C CAPACITOR	2700pF 50V K	
C627	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C628	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C629	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C630	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	
C631	NCS31HJ-471X	C CAPACITOR	470pF 50V J	
C632	NCS31HJ-471X	C CAPACITOR	470pF 50V J	
C633	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C634	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C635	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C636	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C637	NCB31CK-473X	C CAPACITOR	0.047uF 16V K	
C638	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C639	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C640	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C641	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C642	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C643	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C644	NCB31AK-334X	C CAPACITOR	0.33uF 10V K	
C645	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C646	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C651	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C652	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C653	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C654	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C655	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C656	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C657	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C658	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C659	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C660	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C661	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C662	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C663	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C664	NCB31EK-273X	C CAPACITOR	0.027uF 25V K	
C665	NCB31AK-334X	C CAPACITOR	0.33uF 10V K	
C666	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C667	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C668	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C669	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C671	NEAD0JM-476X	E CAPACITOR	47uF 6.3V M	
C672	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C673	NCS31HJ-101X	C CAPACITOR	100pF 50V J	
C682	NEAD1CM-106X	E CAPACITOR	10uF 16V M	
C683	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C684	NEAD1CM-476X	E CAPACITOR	47uF 16V M	
C689	NEAD1CM-476X	E CAPACITOR	47uF 16V M	
C690	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
R501	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R502	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R503	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R504	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R505	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R506	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R507	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R508	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R509	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R510	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R511	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R512	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R513	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R514	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R515	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R516	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R517	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R518	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R519	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R520	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R521	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R522	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R523	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R524	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R525	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R526	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R528	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R529	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R531	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R532	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R533	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R534	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R535	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R536	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R537	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R538	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R539	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R540	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R541	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R542	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R543	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R544	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R545	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R548	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R549	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R550	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R551	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R552	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R553	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R554	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R555	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R556	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R557	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R558	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R559	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R560	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R561	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R562	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J	
R563	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R564	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R568	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R569	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R570	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R572	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R573	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R574	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R581	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J	
R582	NRSA63J-203X	MG RESISTOR	20kΩ 1/16W J	
R583	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R584	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R585	NRSA63J-303X	MG RESISTOR	30kΩ 1/16W J	
R586	NRSA63J-303X	MG RESISTOR	30kΩ 1/16W J	
R587	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R588	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R589	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R590	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R591	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R592	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R593	NRSA63J-4R7X	MG RESISTOR	4.7Ω 1/16W J	
R601	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R602	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R603	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R604	NRSA63J-334X	MG RESISTOR	330kΩ 1/16W J	
R605	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R606	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	
R607	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
R608	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R609	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R610	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R611	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R612	NRSA63J-202X	MG RESISTOR	2kΩ 1/16W J	
R613	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R614	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R615	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J	
R616	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R621	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R622	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R623	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R624	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R625	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R626	NRSA63J-474X	MG RESISTOR	470kΩ 1/16W J	
R627	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R628	NRSA63J-155X	MG RESISTOR	1.5MΩ 1/16W J	
R629	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R630	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R631	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R632	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R633	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R634	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R635	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R636	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R637	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R638	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R639	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R640	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R641	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R642	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R651	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
R654	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R668	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R674	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R675	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R677	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R681	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R682	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R683	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R684	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J	
R685	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R686	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R687	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R688	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R689	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R690	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R691	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
L501	NQL114K-470X	INDUCITOR	47uH K	
L502	NQL114K-470X	INDUCITOR	47uH K	
L571	NQL114K-470X	INDUCITOR	47uH K	
L572	NQL114K-470X	INDUCITOR	47uH K	
L621	NQL114K-470X	INDUCITOR	47uH K	
L622	NQL114K-470X	INDUCITOR	47uH K	
L623	NQL114K-470X	INDUCITOR	47uH K	
L651	NQL114K-470X	INDUCITOR	47uH K	
L652	NQL114K-470X	INDUCITOR	47uH K	
L653	NQL114K-470X	INDUCITOR	47uH K	
B681	NRS181J-0R0X	MG RESISTOR	0Ω 1/8W J	LH3150C
B682	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	LH3150C
CN501	QGB2027L1-22X	CONNECTOR	B-B (1-22)	
CN502	QGF0501F1-08X	CONNECTOR	FFC/FPC (1-8)	
CN601	QGF0527F2-22W	CONNECTOR	FFC/FPC (1-22)	
TH501	NAD0022-103X	N THERMISTOR	10kΩ 10mW F	
X501	NAX0385-001X	CRYSTAL	24.576MHz	
X571	NAX0375-001X	CRYSTAL	16.9344MHz	

Packing materials and accessories parts list

Block No. M 3 M M



Packing and accessories

Block No. [M][3][M][M]

⚠ Symbol No.	Part No.	Part Name	Description	Local
A 1	GET0147-001A	INST BOOK	ENG FRE SPA	
A 2	LVT1042-002A	IMAGE CONVERTER		
A 3	GET0147-002B	INSTALL MANUAL	ENG FRE SPA	
A 4	GET0165-001A	DEMO MODE SHEET		
A 5	GET0155-001A	CAUTION SHEET		
A 6	LVT0717-001B	TROUBLE SHEET(C		
A 7	LVT1046-001A	MP3 SHEET		
A 8	BT-51018-3	WARRANTY CARD		LH310 0J
A 8	BT-51029-1	WARRANTY CARD		LH315 0J
A 9	BT-52006-2	WARRANTY CARD		
A 10	BT-51028-2	SVC CENTER LIST		LH310 0J,LH 3150J
A 12	VKZ4027-202	PLUG NUT		
A 13	VKH4871-001SS	MOUNT BOLT		
A 14	VKZ4328-001	LOCK NUT		
A 15	WNS5000Z	WASHER		
A 16	GE40130-001A	HOOK	(x2)	
A 17	FSJB3002-00C	HARD CASE		LH310 0J
A 17	FSJB3002-00C	HARD CASE		LH315 0C,LH 3150J
A 18	GE20137-003A	MOUNTING SLEEVE		LH315 0C,LH 3150J
A 18	GE20137-003A	MOUNTING SLEEVE		LH310 0J
A 19	GE20150-001A	TRIM PLATE ASSY		
A 20	RM-RK50	REMOCON UNIT		
A 21	----------	BATTERY		
A 22	QAM0306-001	16P CORD ASSY		
KIT	KSFX480K-SCREW1	SCREW PARTS KIT	A12 to A16	
P 1	FSPG4002-001	POLY BAG		
P 2	FSPG4002-001	POLY BAG		
P 3	QPA00801205	POLY BAG	8cm x 12cm	
P 4	FSYH4036-068	SHEET		
P 5	QPA01003003	POLY BAG	10cm x 30cm	
P 6	QPC03004315P	POLY BAG	30cm x 43cm	
P 7	GE30778-001A	CARTON		LH310 0J
P 7	GE30928-001A	CARTON		LH315 0C
P 7	GE30784-001A	CARTON		LH315 0J
P 8	GE10070-001A	EPS CUSHION		